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OUR COAST DEFENCES.

DURING the last fifteen years, the subject of coast defences has attracted the attention of the entire people of this country. The press, the legislative and executive departments of the nation have all considered the importance of the subject; and in several Presidential Messages the advisability of putting the coasts in a condition of defence and security has been referred to.

To defend our coasts adequately was one of the first measures adopted by Washington; and some of the fortifications erected by him still stand in good condition,—evidences of his wise administration for the defence of the nation. By their presence alone, these expensive and powerful forts have, for a hundred years, contributed largely to the security and welfare of our country.

Considering the period in which such fortifications were built, Forts Independence, Warren, Lafayette, Columbus, Delaware, McHenry, Monroe, Sumter, St. Philip, Scott, Pulaski, and many others indicate a wise, judicious, patriotic purpose on the part of the people at that time of maintaining such a system of defence and protection as should secure to them and their children in the important ports and great harbors,—the centres of commerce and the storehouses of the nation,—a condition of peace and prosperity.

These forts have fulfilled their mission; and, now that they have become obsolete, a different system of defence is being adopted which, I trust, will be equally effective for the next hundred years in maintaining peace, security, and prosperity for our people and country.

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To cripple or subject a country to irreparable loss, it is not necessary to invade it. The blockading of the Southern ports during the Civil War by the Federal navy did more to cripple the Confederacy than any other act of the Government. It prevented those States from sending out their products, especially cotton, to the markets of the world. It prevented them from obtaining absolutely essential munitions of war, as well as the elements requisite to their war purposes, and rendered it impossible for them to obtain the necessaries of life, even depriving them of medicines,—especially quinine, which was so much in demand for their hospitals.

The capture of the forts on the coast of China enabled a nation one-twelfth her size, and very much her inferior in material resources and strength, to subjugate that vast empire and bring it to terms.

It is difficult to make those not directly interested in the subject, and who have very little opportunity of knowing the great improvements that have been made in the implements of war, understand present necessities, or the great developments that have occurred during the past three decades. Guns and forts that were effective forty years ago are now obsolete and practically worthless, and could no more stop the modern armored battleship than could a board fence stop a locomotive. The impetus of a modern projectile weighing one thousand pounds, as it leaves the mouth of a 12-inch gun, is equal to that of a 60-ton locomotive with a train of eight cars moving at the rate of fifty miles an hour; and the only means of stopping or destroying such formidable engines of war as other countries have constructed is to use force against force.

It is fair to estimate that the British navy has cost five hundred millions of dollars, and that the navies of Germany, France, and Italy have each cost more than one-half that amount; and, while we believe in having our navy as effective as possible, it is assumed that the United States will not at present authorize the construction of a fleet capable of destroying any of the navies above mentioned. Even if we had a navy of that magnitude, it would be utterly impossible for it to defend a coast four thousand miles in extent. The bitter experience of China illustrates the utter impracticability of such an effort.

Hence, it has been wisely determined to adopt a more economic system of defence; namely, the planting of batteries on *terra firma*, where the guns have great advantage over those that are subject to the rolling sea, and where they can be constructed at the least cost and at the same time possess the greatest power for defence. At first, this method re-

ceived very little support from the people of the United States, simply because the question was not fully understood, and their attention had not been fully brought to the subject. Presidents, Secretaries of War, and officers of the army have called attention in their official reports and public utterances to the necessities of the case; explaining the importance of proper defence, and the character of the armament required to insure a condition of security.

On December 1, 1885, the Hon. Samuel J. Tilden addressed a letter to Hon. John G. Carlisle, Speaker of the House of Representatives, in which he used the following language:—

"The property exposed to destruction in the twelve seaports of Portland, Portsmouth, Boston, New York, Newport, Philadelphia, Baltimore, Charleston, Savannah, New Orleans, Galveston, and San Francisco cannot be less in value than five thousand millions of dollars. To this must be added a vast amount of property dependent for its use on these seaports. Nor does this statement afford a true measure of the damage which might be caused to property and business that would occur from hostile naval attacks."

It is safe to say that, since that time, the population and wealth of the abovenamed ports, as well as of others of great importance, have nearly doubled. Again, Mr. Tilden says:—

"To provide effectual defence would be the work of years. It would take much time to construct permanent fortifications. A small provision of the best modern guns would take several years. Neither of these works can be extemporized in the presence of imminent danger. A million of soldiers, with the best equipments, on the heights surrounding the harbor of New York, in our present state of preparation, or rather in our total want of preparation, would be powerless to resist a small squadron of war-steamers. This state of things is discreditable to our foresight and our prudence. The best guarantee against aggression, the best assurance that our diplomacy will be successful and pacific, and that our rights and honor will be respected by other nations, is in their knowledge that we are in a situation to vindicate our reputation and interests. While we may afford to be deficient in the means of offence, we cannot afford to be defenceless."

Some of the best literature on this subject appeared in a series of magazine articles written by Col. J. A. Frye, of Boston, Massachusetts.

At a meeting of governors, called by Hon. H. M. Mitchell, then Governor of Florida, and held at Tampa in January, 1897, there assembled one hundred and forty delegates, representing, together, twenty-one States, with official representatives from the United States Army and Navy. The convention lasted from January 20 to 22, inclusive. A most careful consideration was given to the defensive requirements of the country; and, after the subject had been fully considered by the

assembled representatives of the different States and organizations, the following resolutions were adopted:—

"*Whereas*, This Convention appreciates its inability to determine the important question of coast defence from a technical standpoint, it, therefore, is

Resolved, That it does appreciate the necessity of immediate protection to the seaboard of our country, and the importance of defending all points liable to invasion by hostile forces; and, therefore, it is further

Resolved, That this Convention does most earnestly urge upon our Representatives in Congress the necessity for immediate appropriations sufficient to carry out the plans formulated by the War Department; and does further urge that such appropriations be made available at once, to the end that the plans of the Department may be completed without delay.

Resolved, That, with a view to securing the best results from its deliberations, this organization, to be known as 'The National Defence Association of the United States,' be made permanent; and that said permanent organization shall consist of a president, seven vice-presidents, a secretary, a national committee (which shall be also an executive committee), consisting of one from each State, and a committee on State legislation, consisting of three from each State. . . ."

Thus, it will be seen that the importance of the subject of coast defences has so much interest for the people that their representatives are taking earnest and active part in promoting the great national enterprise. An expression of this sentiment was voiced recently by the action of the New York Chamber of Commerce in a set of resolutions, as follows:—

"At the Monthly Meeting of the Chamber of Commerce, held Thursday, November 4th, 1897, the following report of its Committee on Harbor and Shipping, on the subject of Harbor Defences, was unanimously adopted:—

TO THE CHAMBER OF COMMERCE:

Your Committee on Harbor and Shipping, in accordance with the request of your president, as contained in his letter of September 8th, has had under consideration the subject of Harbor Defence, and particularly the urgent necessity of at once providing an addition to the existing army corps of a body of men to be trained in the duties of handling all the new modes of defences—particularly the modern high-power guns, rapid-fire guns, mortar batteries, system of mines, search-lights, etc. The United States Government has at this time only the very small number of 3,890 Artillerymen, including ten batteries of light Artillery, of which number, it is stated by competent authority that, being enlisted from the ordinary sources, one-half, at least, are incapable of becoming trained gunners; whilst the present fortifications around the city of New York alone require 7,000 men to man them, and when those under construction at this Port are completed, they will need a force of 13,000. Most able and exhaustive articles on the subjects of 'Readiness for War,' 'Federal Duty and Policy,' and 'Coast Artillery Practice' will be found in the 'Journal of Military Service' for September; and an equally valuable one, in preparation and to be published in the November issue of the same journal, by Gen. Geo. W. Wingate, will satisfy every reasonable man of the incalculable value these defences have and will always present,

in view of the very enormous amount of property in this great city at the mercy of any inimical naval Power. We strongly urge anyone who impulsively, or for any reason, is prompted to object to such outlay to read these articles. Your Committee deem no arguments from them can add to their force, and congratulate their fellow-citizens that the policy of the Government has been already moulded by public sentiment in favor of the most efficient measure of defence. By the resolution presented herewith, the necessity of the action therein urged is self-evident; and your Committee cordially and unanimously recommend its adoption:

Whereas, The United States is now constructing modern sea-coast defences to include over 500 high-power guns, 1,000 12-inch mortars, and 360 rapid-firing guns, to be grouped at over one hundred and ten different points in about twenty-five different harbors, and has made appropriation for over 350 high-power guns and about the same number of 12-inch mortars, of which one-half can be in their emplacements by June, 1898, and

Whereas, The present United States Artillery force is wholly inadequate in number to care for and properly man these guns in their emplacements, or to be properly organized into a defensive system, or to furnish a nucleus of instructed Artillerymen for the proper manning of these defences in case of war; be it

Resolved, That we, the Chamber of Commerce of the State of New York, being fully impressed with the urgent need of an increase in number of the Federal Artillery force, to properly insure the vast amount of property of our city and other sea-coast cities against destruction and the levying of contributions that would be visited upon us in the event of war with foreign nations, do earnestly request and urge the President and Congress of the United States to take such immediate action as will provide a force of trained Artillerymen for the proper manning of our sea-coast defences; and it is believed by us that 110 sea-coast batteries requiring a numerical increase of the army of about 4,000 Artillerymen is absolutely necessary to accomplish these purposes."

The immense population that they represent, and the vast interests involved, justly warranted them in taking such an earnest part in calling the attention of the Government, and especially Congress, to this important subject. It is a subject in no sense local. It affects four thousand miles of coast frontier; and anything affecting the great avenues of commerce, the centres of wealth and population, is of vital importance to the people of the entire country. Any serious injury to the welfare of these communities would affect the welfare, interests, and political rights of every citizen within the borders of our land.

There are two impressions entertained by many of our people that, in my opinion, are not well founded, even if they cannot be regarded as illusions; and they are certainly entitled to full and impartial consideration. One is that we have reached the millennium, that the world has become sufficiently enlightened to abhor war, and to settle all its national and international affairs on intelligent and humane principles. What facts warrant such a pleasing sentiment, belief, or hope? The

heralds of time that record the passing years and months record also national strife and wars in some part of the world. There never was a time in the whole history of the world when so much ingenuity, wealth, and skill were employed in the invention and construction of the appliances of war. The fact that the art of man has utilized high explosives and metals of the most extraordinary and hitherto unknown density and tenacity, together with electricity and other modern appliances, does not indicate that wars will be less frequent or that the destruction of life will be so great as to prevent the use of such appliances. With all these changes, the principles of war have not changed, though the tactics used by the contending forces have been modified. Battles are now fought at greater distances because of the use of the modern arts of war; and the result is that the mortality is less now than when the legions of the Cæsars or the Corps d' Armée of Napoleon were brought into close mortal combat with their antagonists.

The other impression—equally ill founded, it appears to me, in experience and history—is, that timely warning will always be given and ample opportunity allowed to prepare a nation for a condition of war. In fact, the unexpected more frequently occurs; and war comes, like the cloud-burst or the sweep of the tornado, when a nation or people is unprepared. In 1881–3, the question came up in England as to whether it had been customary for a nation to declare war before the opening of hostilities; and the subject was carefully considered by the British government. The facts assembled were printed under the title of "Hostilities without Declaration of War: a Historical Abstract of the Cases in which Hostilities have Occurred between Civilized Nations Prior to Declaration or Warning, from 1700 to 1870."[1] A brief history of wars was given; and it was found that in the one hundred and seventy years, between 1700 and 1870, in which one hundred and seven wars were recorded, there had been less than ten instances in which any formal declaration of war had been made before actual hostilities commenced.

It is unreasonable to suppose that the great majority of people desire war; yet we know that wars frequently occur when least anticipated. The history of the wars that have occurred since 1870 is familiar to most readers; and it is unnecessary to refer to them to illustrate the fact that hostilities occur before any formal declaration is made. Nor

[1] The compilation was made under the auspices of the Intelligence Branch of the Quartermaster's Department, by Lieut.-Col. J. F. MAURICE, Royal Artillery (London, 1883).

need we refer to incidents of recent occurrence, where imperative demands have been made by one government upon another, with but a few days or hours allowed for compliance with such demands, under penalty, on non-compliance, of the occupation of territory or the bombardment of towns and cities.

Hence, the injunction of Washington, that "to be prepared for war is one of the most effectual means of preserving peace," comes down to us with peculiar force and with a sacred significance.

The great engines of war are now so complicated,—the spear, the shield, and the hunting-rifle having been superseded by massive pieces of machinery,—that they can be used only by skilled, trained artillerists; and the safety of the country not only requires that such complicated ordnance shall be constructed and available, but, also, that a corps of trained men shall be available to work it. The modern systems of defence by torpedoes, submarine mines, high-power guns, mortars, machine-guns,—all require skilled men to use them effectively; and too much credit cannot be accorded to the brave men who enlist in the Government service as officers and soldiers, and will be called on to risk their lives in face of the terribly destructive weapons that will be turned against them by the military or naval force which may essay to attack our frontier. The fortitude, courage, and patriotism of such men are worthy of the highest commendation by the people, whose property, lives, and liberties they cheerfully defend.

NELSON A. MILES.

THE FUTURE OF BIMETALLISM.

SINCE the failure of the Wolcott Commission, it has been vehemently asserted by the enemies of silver that bimetallism has been killed, and that "its corpse lies in Downing Street." No intelligent bimetallist expected from the Commission anything but failure. England dominates the finances of Europe; and Mr. Gladstone voiced correctly the sentiment of the ruling classes in that country, when he declared that England was the creditor nation of the world, and that she intended to collect her indebtedness in gold.

In the late Presidential campaign, the friends of silver asserted that bimetallism would never be attained by international agreement, and that the only hope for it lay in the action of the United States without waiting for European nations. On the other hand, the enemies of silver declared for bimetallism by international agreement; and thousands of voters who favored bimetallism, but who had previously affiliated with the Republican party, supported Mr. McKinley in the hope that his Administration could, by international agreement, open the mints of the world to silver coinage.

When Congress was convened in extraordinary session after the Presidential election, the President-elect devoted his Message to the Tariff, without pressing the Silver Question for consideration; and but for the peculiar exigencies existing in Colorado politics, nothing would have been done in regard to silver during that session. The Republicans of Colorado were overwhelmingly in favor of the free coinage of silver, and the State had so voted in the Presidential election; but its Senators parted company in the canvass, although both declared for bimetallism. Senator Teller left the Republican National Convention openly and defiantly, when it declared against bimetallism except by international agreement; bitterly denouncing such action as a pretence and fraud. Senator Wolcott remained with his party, and risked his political future on the promise made in its platform.

No just criticism can be made of Senator Wolcott for calling the attention of President McKinley to the pledge for international bimetallism in the Republican platform, and demanding that an attempt

should be immediately made to redeem it. Whether the President believed the attempt would be successful or not, he was compelled, in honor and good faith, to make the venture. Senator Wolcott was therefore sent to Europe on a preliminary visit, to ascertain the prospects of success; and, on his return, he introduced in the Senate, with the approval of the Administration, resolutions authorizing the appointment, by the President, of commissioners to confer with the representatives of European nations as to a common ratio between gold and silver.

No serious opposition was made in Congress to these resolutions. The Republicans favored them because they were pledged to the action proposed; and the friends of silver were not only willing, but anxious, to demonstrate the truth of their prediction that England would never agree to any step toward bimetallism.

The failure of this Commission, instead of killing bimetallism, has immeasurably strengthened it in the United States. There can hereafter be no evading the issue between the single gold standard and bimetallism. Every pretext for delay and misunderstanding has been swept away; and the people of this country must decide in the next contest whether silver shall be used only as subsidiary coin, or be restored to its former position as money of ultimate redemption.

That bimetallism has not been killed by the failure of the Wolcott Commission, is evident from the result of the recent elections. The States of Colorado, Nebraska, and Virginia have reaffirmed their loyalty to free coinage; while Kentucky and Indiana have reversed their action in the Presidential election, and indicated that in the future they will be found on the side of silver. In Ohio, the result has been most disastrous to the single gold standard. The popular majority for Mr. McKinley in November, 1896, has been reduced by nearly one-half; and the chairman of the Republican National Committee finds the legislature so evenly divided as to make his election to the United States Senate not only uncertain, but improbable. In all these States, the free coinage of silver was a distinct issue; the Democratic candidate for President making an active canvass in Kentucky and Ohio, and everywhere emphasizing his well-known opinions.

The result in Maryland, where the reëlection of Senator Gorman overshadowed other questions, cannot be considered a defeat of silver; for the platform of the Democrats was silent upon the subject of free coinage, and Senator Gorman had voted in the Senate with the advocates of the single gold standard. It must also be observed that the Mayor-elect of Greater New York is an open advocate of free coinage.

Those who dispose of these facts by denouncing the bimetallic movement as an ephemeral craze, and its advocates as lunatics and idiots, advertise their own ignorance.

If the 6,491,977 voters who supported Bryan in 1896 and controlled the recent State elections, are lunatics and idiots, deceived by demagogues and self-seeking politicians, there is no hope for free institutions and popular government. The experiment is a failure; and the functions of government must be turned over to the members of the Sound-Money League, who have solemnly resolved that bimetallism is supported only by the ignorant or dishonest.

Epithets and denunciation prove nothing. If such weapons could stop a great popular movement, Abraham Lincoln would never have been President, and African slavery would still exist on this continent. The torrent of abuse and ridicule which rolled mountain-high against the Anti-Slavery movement would have overwhelmed it, but for the fact that a deep, earnest, popular conviction against slavery existed in the Northern and Middle States, which could not be stayed in its course by the eloquent invective of the Southern leaders.

In 1856, John C. Fremont, an accidental candidate, received 1,341-264 votes for President; while Buchanan, the Democratic candidate, had 1,838,169 votes, a majority for the latter of 496,905. In 1860, Abraham Lincoln received 1,866,352 votes on the Free-Soil ticket, and was elected.

In the last Presidential election, McKinley's vote was 7,105,629, and that of Bryan 6,491,977; the majority of the former being 613,650. The statement that this vote for Bryan comes from crazy impulse or ignorance, is a reckless slander.

As in 1856 and 1860, the American people revolted against African slavery, and determined to overthrow it, so, in 1896, they deliberately declared, by an immense vote, that the slavery of the single gold standard should be overthrown, and silver restored to its former position as money of ultimate redemption. That a majority did not so vote in 1896 is no more conclusive of the issue than was the election of 1856. The struggle will never end until bimetallism is the settled policy of the United States. Great reforms are never consummated without labor, sacrifice, and delay, especially when money and privilege are against the change; but if the reform appeals to that innate sense of justice and right which permeates the masses of mankind, the movement will eventually succeed in every republic. Boards of trade, chambers of commerce, and monetary commissions composed of capitalists and bankers may denounce and deride; but the popular will will work out the right result.

That the mints of this country were closed to the free coinage of silver in 1873–4 for a sinister purpose, and by secret methods, is the fixed opinion of many millions of voters. The more closely the history of that transaction is examined, the more difficult it becomes to reconcile the facts with the open and fair dealing which should characterize the affairs of a free people. The least that can be said is that the legislation of 1873 and 1874 demonetizing the silver dollar was most remarkable.

It is a matter of history that at the Monetary Conference of 1867, in Paris, a letter was read from the Hon. John Sherman, chairman of the Finance Committee of the United States Senate, in which it was stated that the people of the United States were favorable to the single gold standard. While this may have been Mr. Sherman's opinion, it is difficult to find any basis for his conclusion. There had been no discussion of the question in Congress or in the press, nor any alignment of parties upon it. If the design to demonetize silver existed, it was certainly not among the people generally, but was confined to bankers and capitalists.

At the following session of Congress, Mr. Sherman introduced a bill establishing the single gold standard. This bill was referred to the Finance Committee of the Senate, and was soon reported by Mr. Sherman with a majority report in its favor, but also with an adverse report by one member of the Committee, Senator Morgan of New York.

No action was taken upon these reports by the Senate; and, some months afterward, Senator Morgan was succeeded by Senator Fenton, a friend to the gold standard. If the people of the United States were favorable to the single gold standard, it is singular that the bill reported by Mr. Sherman was not pressed for action; and it is equally remarkable that, in 1873,—nearly four years later,—when Mr. Boutwell, a strong adherent of the single gold standard, had become Secretary of the Treasury, a mintage bill was selected to effect the great change in our coinage which had been attempted and abandoned in 1868.

Mr. Sherman has asserted many times that the provision demonetizing the silver dollar was not secretly enacted, nor its discussion evaded; and I do not question his veracity. But the fact remains that leading Members of the Senate and the House, both Republicans and Democrats, knew nothing of the important clause; and President Grant, who signed the bill, expressed his surprise, months after the law had been enacted, that no more silver dollars were being coined.

It is possible that Mr. Boutwell may not have thought the matter of sufficient importance to justify him in calling the President's attention to it; but the omission was most unfortunate.

Whatever may have been the motives of those who managed the bill that demonetized the silver dollar, a cloud of suspicion rests upon the transaction; and the impression has been made that indirect and questionable methods were adopted to fasten the single gold standard upon this country. At the time this was done, the silver dollar was worth three cents more than the dollar in gold, so that not the slightest justification, on the ground of an overproduction of silver, can be found for the legislation of 1873–4.

It is often urged by the friends of the single gold standard, as an extenuating circumstance, that a large amount of silver dollars has been coined since the laws of 1873–4 were enacted; but the record shows that, in every instance when more silver dollars were coined, Mr. Sherman and his associates were forced to yield. The Bland-Allison Law was enacted against the veto of President Hayes, when Mr. Sherman was Secretary of the Treasury; and the Sherman Act of 1890 was coerced from Mr. Sherman and other leaders of the Gold party—as he himself has often stated—by the Republican Senators from the silver-producing States of the West.

It is no answer, however, to the just attack upon the legislation of 1873–4, that silver dollars have been coined since that time. What the friends of bimetallism denounce is the closing of the mints to silver coinage, and then using the commercial depreciation of silver bullion as an argument against silver money. They charge—and statistics support them—that there is not enough gold and silver in the world for the necessities of business, and that the mints have been closed to silver for the purpose of decreasing the volume of redemption money, so as to increase the purchasing power of gold. They believe that the pending struggle is the fight which has been waged in all the centuries,—the attempt to use governmental powers by the rich and powerful to increase their incomes at the expense of the masses. No intelligent or honest man expects to enact laws which will put money into the pockets of those who do not labor; but money should not be diminished in volume below the amount necessary to afford every human being fair opportunity to secure just compensation for the product of his or her enterprise and toil. The single gold standard is an instrument of tyranny,—the foe of that equality which is the basis of free institutions.

It cannot be denied that plausible arguments can be made against bimetallism by the men whose trained intellects have been devoted to the art of making "money breed money." They parade the spectres of "repudiation," "dishonor," and the "single silver standard."

As to repudiation, it is enough to say that no bimetallist advocates or contemplates it in any degree or form. The friends of bimetallism are pledged to the payment of all national and individual obligations honestly and fully as stipulated between creditor and debtor. They do not propose to pay in fifty-cent dollars, but in dollars of full purchasing power and value. When the mints of the United States are again opened to the coinage of silver legal-tender dollars, the commercial value of silver will at once rise to that of gold, on the established ratio.

It is axiomatic that the legal-tender money of any nation is worth throughout the world the value of the purchasable products of that nation. The silver dollar of the United States is worth one hundred cents everywhere; not because it is redeemable in gold, for it is not, but because it has the legal-tender quality and will purchase all the products of this country. The legal-tender silver dollar of Mexico is worth only fifty cents outside Mexican territory; and the cause is obvious.

In 1894–5,—the last official report obtainable,—the exports of Mexico amounted to $90,854,953, of which, $53,535,854 were gold and silver, and $37,319,099, merchandise. During the same year, the exports of the United States amounted to $906,751,099, of which, $113,358,500 were gold and silver, and $793,392,599, merchandise.

In the last fiscal year, the balance of trade in our favor was larger than ever before; and, with increasing resources, it is safe to assume that the time will never come when foreign countries will not be compelled to buy from us, in large quantities, the necessaries of life. So long as this is so, our legal-tender money will be at par throughout the world.

The prediction that this country will be forced to the single silver standard, by opening our mints, has been often shown to be ridiculous; and recent events have demonstrated its worthlessness. Foreign nations cannot ship silver coin to this country, because there would be a loss by reason of the difference in ratio; and they cannot possibly dispense with their present supply of silver.

The Bank of England has lately increased its silver reserve, and five nations of the Latin Union have agreed to enlarge their silver circulation; while all the silver exported from Mexico and the United States finds a market in Europe, although the mints there are closed to free and unlimited coinage.

A fatal mistake is being made by the advocates of the single gold standard. Instead of conservatism and compromise upon a question about which honest and educated men have always differed, they are proscriptive, unreasonable, and insulting.

The Sound-Money League, at a recent meeting, passed resolutions declaring for gold only, and denouncing the friends of silver as public enemies who were frightening foreign capital from our shores. In other words, they favor an increase of our indebtedness to foreigners, and its payment in gold. Are they not making the mistake of the old slave-owners, who refused any compromise, and demanded all or nothing?

Is it wise, in the face of present conditions, to demand the continuation of a money system which makes us dependent upon foreign capital, and increases the enormous burden of interest?

It is certain that Argentina, Australia, and India will not be purchasers, but competitors in the wheat market within a year; and the gold-miners of the Klondike cannot be relied upon to change the financial status of the world. When wheat declines in price, and the golden dreams of Alaskan adventurers are ended,—when hard times again confront the masses of our people,—how will they vote?

If business disturbance is the result of free coinage, and European capitalists throw their American securities upon Wall Street, who is responsible? Only those who have forced the friends of bimetallism to choose between the gold standard and possible panic, caused by disappointed greed.

Nations and individuals must reap what they sow. The people of the United States have been living in "a fool's paradise," borrowing from Europe, and piling up interest, until a class has grown among us that openly advocates more borrowing and more financial slavery. The sturdy independence of foreign domination, taught by our fathers, is derided and denounced. The railroads, breweries, factories, and lands of the United States are year by year passing into the hands of foreigners. The Union Pacific Railroad has just been purchased by a foreign syndicate; and the Kansas Pacific will be bought by the same parties. No amount of silver agitation in the United States seems to stay the tide of foreign investment, although the threat is continually made by the gold-standard advocates that the possibility of bimetallism hangs like a pall above our credit.

The time has come to end the vassalage to foreigners created by enormous debt. We must cease borrowing, and devote all our energies to paying what we owe. We are strong enough to adopt bimetallism, and to defy the malign soothsayers who worship "the golden calf."

G. G. VEST.

ELECTRICAL ADVANCE IN THE PAST TEN YEARS.

THE variety of service to which electricity has already contributed cannot fail to impress every one. We communicate by telegraph over the land and under the seas. Our electric signals may bring into almost instantaneous action the machinery of a modern fire department, or simply note the flight of time in a clock system.

The stock ticker records the changing values: the police telegraph anticipates the criminal in his flight. The same agent, which in the telephone carries the inexpressibly feeble overtones of the voice to great distances with the speed of light, conveys energy equal to thousands of horse-power and distributes it for lighting our streets, our factories, our shops, and our homes. The electric search-light may rival the sun in the brilliancy of its beams, or a tiny incandescent lamp may not equal one-tenth of a candle-light. Electric motors ventilate our buildings, drive our machinery, and run our elevators. We travel swiftly on electric cars, propelled by current from wires which also furnish the means for lighting and heating the cars.

In mills and factories, the power is carried to the different buildings oftentimes by electricity; and electric railways distribute the raw materials and deliver the finished products for shipment. In mines, coal is cut and transported to the pit's mouth by electric power; and the same power works the ventilating-fans. Metals are welded and forged by electric heat; and some are smelted from their ores by electricity. The electrolytic bath either refines crude metals or coats and protects them, as in nickel-plating.

Power is now transmitted over great distances by wire; and the energy of waterfalls is made available for innumerable uses far from its source. New and valuable products arise from the high heats of the electric furnace. That paragon of nature's, the diamond, can now be fashioned in an electric crucible from plain black soot.

Nearly all the larger electrical work has been the result of the past twenty years of progress. Before directing our attention to the great work of advance in recent years, we may recall some of the more notable events in applied electricity which occurred in the late 'seventies and

immediately thereafter. It was then that the commercial beginnings of arc-lighting took place. The incandescent lamp or burner and the electric main for supply of current soon followed. The telephone itself, considered as a practically working speech-transmitter, belongs to the period referred to. Its birth was first made known at the Centennial Exhibition in Philadelphia in 1876. The almost ideal power of electric motors was applied in a limited way. The fruits of the pioneer work of that period have ripened in recent years. The experimental work in electric railways, begun in the early 'eighties, resulted in the enormous electric-traction development of to-day, when almost all our street-railways are operated by electricity.

In this connection, it is very interesting to note that, at a convention of street-railway men held so recently as 1887, a discussion of electric traction as applied to horse-railways was vigorously criticised as a waste of time which, it was urged, might have been better applied to practical subjects, instead of to such a fanciful or theoretical one. In fact, the contention was that the care and feeding of horses should take precedence of so unimportant a subject as electricity, considered as the motive power of a car system. Yet, in less than five years from that time, the horse question had everywhere become an exploded one. A convention of the same association in the present year assumed in its papers and discussions the universal application of electricity to street-car propulsion. Had the advent of the electric railway marked the only great advance within the ten years just past, that period might still be well characterized as one of great technical progress in electricity. Had the decadence of horse-traction occupied a much longer period than it did, the advance could justly be deemed rapid.

Many of the largest street-railway systems were transformed in a few months' or in a year's time. The advance still goes on by extensions of existing lines, by the establishment of additional inter-urban and suburban traffic facilities, by the increase of equipment, and by the steady improvement in the quality of that equipment.

To appreciate the real progress of the past ten years, demands a wider view. We must consider many other branches of electrical work besides electric traction.

What, then, was the condition of the art ten years ago? By comparison with the present status, we may, generally speaking, get some idea of the growth during the past ten years. In thus looking backward, we find that there were telephone-exchange systems, but practically no long-distance extensions. We also find that in the larger cities and towns arc-

lighting circuits for street and store service were in use, employing only the constant-current or series system; while to-day arc-lights of various kinds are worked on several plans, or with different kinds of current-supply. There were, in addition, a moderate number of electric stations, supplying incandescent lamps, together with a few electric motors. Here and there, isolated lighting-plants in mills and other large buildings were in operation; but the alternating current, so large a factor in electrical enterprises nowadays, had scarcely become known or applied practically. There were perhaps not more than twenty trolley cars in actual service in 1887; and these were of doubtful success. There were no regularly constituted electric railways worthy of the name. The telephone and electric-lighting wires were largely overhead; and frequently the construction was of the most imperfect and temporary character. Among some notable exceptions, stood prominent the Edison three-wire underground system, which had the elements of permanence. The extensive underground mains and wires in use in cities to-day testify to the great progress which has taken place in the means of distributing electric energy. They represent a very large investment of capital; but they also confer that reliability and permanence which was before lacking.

Within the past eight or ten years, much has been done in the perfection of thoroughly practical forms of meters and other instruments for the measurement of electric forces and quantities. While such work resembles in its delicacy that demanded by watch mechanism, on the other hand, the large station-dynamos are examples of the heaviest machine construction. Some of them demand steel castings more than thirty thousand pounds in weight. Indeed, in the same electric factory we may find watchmaking tools turning out the fine pieces of electric meters, which may not weigh more than a few grains, and electric cranes handling masses of metal of many tons,—parts of the larger dynamos under construction. A few years ago, a dynamo was large if it demanded one or two hundred horse-power to drive it; while now such machines are diminutive, when compared with those of two thousand horse-power commonly constructed.

Dynamos are in use at Niagara of five thousand horse-power capacity. A single one of these would supply more than fifty thousand incandescent lights such as are ordinarily used, or would give motion to five hundred trolley cars.

The period since 1887 has been marked by great extension in electric lighting by both arc and incandescent lamps. Prior to that year,

only the largest cities, broadly speaking, possessed any electric-lighting service. Now, however, even the smaller towns have their electric stations, their arc lamps for street lighting, and the smaller incandescents for general use. The same wires or mains frequently supply both kinds of lights. The incandescent lamps in use in the United States are numbered by millions; and there are several hundred thousand arc lamps besides. There are in operation nearly three thousand electric-light-supply stations; and these, together with isolated electric plants, represent a capital of about five hundred million dollars.

One of the chief factors in this great extension has been the application of alternating electric currents, or currents of wave-like nature, reversing their direction many times in each second. The direct or continuous current had previously occupied the field alone. But the alternating current possessed the advantage of readily permitting the sending out over a long distance of a high-pressure current with but little loss and by means of comparatively small and inexpensive lines. This current, relatively dangerous, could then be exchanged for a safe low-pressure current on the house mains for working the lights.

The device which makes the exchange is called a transformer. It is in reality a modified induction coil,—a simple structure of copper wire, sheet iron, and insulating materials, with no moving parts to need attention or to get out of order. The properties and use of the transformer in an alternating-current system were comparatively unknown before 1887; but since that time it has played a part in electric development the importance of which cannot easily be overestimated. It has been furthermore brought to a high degree of perfection by the persistent and painstaking effort of numerous workers.

In transforming a current of high pressure to one of lower pressure, or the reverse, only a very slight loss of power or energy is suffered. On a large scale, this loss is barely 3 per cent of the energy of the transformed current. The larger sizes of transformers now in use have capacities equivalent to considerably over one thousand horse-power. Some of these structures are employed at Niagara, and others at Buffalo.

As in the case of the apparatus just mentioned, the effort spent in the perfection of the huge dynamo-electric generators used in lighting- and power-stations has resulted in machines so perfect as to leave but little chance of further increase of effectiveness. They waste only a small percentage in converting mechanical power into electrical energy, and run for years with but little attention or need of repairs.

Along with all this improvement has gone a like betterment in the

thousand and one details and minor devices which go to make up an electric system. Both incandescent lamps and arc lamps are not only much improved, but, also, their cost is greatly reduced by the use of special machinery and processes of manufacture. Wires, insulating materials, switches, etc., are all far in advance of what they were a few years ago. Safety is secured by many ingenious devices; and the methods of operating have been made far more effective.

It cannot, with truth, be said that electrical arts or industries are still in their infancy, if we are to judge by the perfection of electric manufactures. It has been many years since electrical work could in any sense be regarded as empirical, except by the uninformed. Few of the older arts have possessed or do possess the means for such exact measurement or research: few, indeed, are based upon simpler laws of action. Had it been otherwise, the rapid progress which has characterized the past twenty years would have been impossible.

A striking feature of electrical energy is that it may be readily applied to widely varied work.

A few instances of this may be given. The large electric-lighting stations in our cities not only supply from the same mains, at the same time, electric current which lights both arc and incandescent lamps indiscriminately, but the system carries also a large load in electric motors employed for such service as running elevators, driving ventilating-fans, supplying power for pumping, and driving machinery in shops of all kinds. The same mains supply current for charging storage batteries, for heating metals for welding or working, for warming rooms by electric heat, or for cooking by electric heaters. The physician or surgeon draws upon the same system for current for the treatment of disease, for galvano-cautery, for electrolysis, and for the generation of Roentgen-rays.

Another example is found in a modern warship, which may embody an electric plant for working its incandescent lights. The same machinery supplies the search-light, which is essentially an arc-light of great power. There are also electric cranes and hoists, turret-turning and gun-training apparatus, motors for ventilating-fans or for forced draught in the boiler furnaces,—all depending on the same supply.

Perhaps, however, no better example of the varied application of electric energy exists than at Niagara. Certainly no grander exemplification of the way in which electric forces may be called into play, to replace other and unlike agencies, can be cited. Here at Niagara we may forcibly realize the importance of cheap and unfailing power de-

veloped from water in its fall. We find the power of huge water-wheels delivered to the massive dynamos for giving out electric energy. This energy is variously employed. The electric lighting of the city of Niagara and surroundings, and the electric railways naturally depend upon the water-power. Besides these, which may be termed the ordinary applications of electricity, there are clustered at Niagara a number of unique industrial establishments, the importance of which will undoubtedly increase rapidly. In the carborundum factory we find huge furnaces heated by the passage of electric current, and attaining temperatures far beyond those of the ordinary combustion of fuel. These electric furnaces produce carborundum,—a new abrasive, nearly as hard as the diamond, which is a combination of carbon and silicon, unknown before the electric furnace gave it birth. Sand and coke are the raw substances for its production; and these are acted upon by the excessively high heat necessary to form the new product, already in extensive use for grinding hard materials.

The metal aluminum, which not many years ago cost two dollars an ounce, is now produced on a large scale at Niagara, and sold at a price which makes it, bulk for bulk, cheaper than brass. Here, again, electricity is the agent; but in this case its power of electrolyzing or breaking up strong chemical unions is employed. Great vats containing fused compounds, such as fluorides of certain metals in which the aluminum ore is dissolved, are arranged so that a powerful electric current sent through the fused mass separates out the metallic aluminum. The metal is then collected and cast into ingots for shipment, or is rolled into sheets or rods, or drawn into tubes or wire.

Works for the production of metallic sodium and other metals similarly depend upon the decompositions effected by the electric current.

Solutions of ordinary salt or brine are electrolyzed on a large scale in extensive works established for the purpose. The chlorine of the salt is used with lime to make bleaching-powder, so important an agent in paper-making and textile industries. The sodium of the decomposed salt goes to form caustic soda, which is the base of soap and is employed in many manufactures.

The very high temperature which exists in an electric arc, or between the carbons of an arc lamp, has in recent years found application in the manufacture of another important compound, which was formerly but slightly known as a chemical difficult to prepare. Carbide of calcium is the compound referred to; and large works for

its production exist at Niagara. Here again, as in the carborundum works, raw materials of the simplest and cheapest kind are acted upon in what may be termed an electric-arc furnace. Coke, or carbon, and lime are mixed and charged into a furnace in which an enormous electric arc is kept going. The carbons in an ordinary arc lamp are usually less than one-half inch in diameter, or they have a section of less than one-fifth of a square inch; while in the carbide-of-calcium furnaces the section of the carbon may be upward of half a square foot. The light of the enormous arc produced is, however, smothered, so to speak, in powdered lime and coke,—the raw materials mentioned above. The importance of carbide of calcium rests in the fact that, by contact with water, it produces acetylene gas. The illuminating power of this gas, when burned, is its remarkable property.

It will be seen that the metallurgical and chemical developments at Niagara are the direct outgrowth of electrical utilization of water-power. With many water-powers, however, the outlet for the application of the electrical energy exists many miles away from the place at which the water-power is found. Even at Niagara there is an example of the beginning of long-distance transmission, by a high-pressure line extending to Buffalo and delivering electric energy to an electric station there.

In this case, "step-up" transformers, as they are called, are employed at the Niagara power-plant to step up or raise the electrical pressure or potential from that given by the dynamos to that required for the transmission to Buffalo. This transformation is from about twenty-five hundred up to ten thousand volts. At the Buffalo end, the reverse process is carried on by "step-down" transformers, and the energy is delivered to the trolley lines at about five hundred volts. At Buffalo, the "step down" in pressure is accompanied by a conversion of the alternating current into a continuous current in one direction or a direct current. It would require too much space to explain the meaning of these technical designations of the kinds of current; and they are referred to here solely to illustrate the extreme flexibility of electrical work as lately developed. The whole Niagara plant has grown into existence within the past five years, and as a consequence of the technical advances within the period of the past ten years. There are, however, in active operation, besides the Niagara power-plant, several other water-power transmissions, some of them far exceeding in distance that between Niagara and Buffalo, and some in which the amount of power conveyed, as well as the pressure of the current used upon the line, is much greater than is yet to be found at Niagara.

Electric transmissions are in particular favor in regions where the cost of steam-power, owing to dear fuel, is a stimulus to the utilization of water-powers which already exist, or which are capable of development. It is not surprising, therefore, that the Far West should furnish some of the most notable examples.

No limit can as yet be definitely set as to the distance which can be covered in an electrical transmission. The higher the voltage or electrical pressure which may be found practicable, the greater the distance which may exist between the transmitting and receiving machinery. So also, the higher the cost of fuel in a locality, the greater the distance over which it is feasible to make the transmission. It may be said that at present the range of distances is between thirty and one hundred miles.

It is interesting to compare the conditions in long-distance telephony with those of a power transmission. With the former, an exceedingly feeble current is sent out; and though only a small percentage reach the receiving telephone, still it may be sufficient to produce the sounds of the voice with such distinctness as to enable them to be recognized. To secure this result, the long-distance telephone lines are made of heavy copper wires; and the longer the distance to be covered, the thicker must be the line-wire.

The cost of the copper in the line becomes very heavy for great distances, over a million pounds of copper being required for a single circuit from Boston to Chicago. In a power transmission, on the other hand, the currents are of great pressure, and sometimes represent thousands of horse-power; and it is essential that in the transmission not more than a certain percentage of the energy be lost. Thus, in some cases, a 20-per-cent loss would be too much to allow, and in others a 25- to 30-per-cent loss might not be inordinate.

In this case, again, heavy copper wires are used for the lines, insulated as well as possible; and the cost of the copper for obtaining conducting power sufficient to prevent undue loss, other things being equal, sets the limit of distance. In the telephonic transmission, the percentage of loss is not important, provided the characteristics which represent speech in the receiver are not lost; while in the power transmission the percentage of loss is vital, as the object of the plant is simply to transmit energy under economical conditions.

In the large work of to-day, the general practice is to build the dynamo directly upon the shaft of the engine which drives it, or upon the water-wheel shaft, as the case may be. This avoids loss in belts or other forms of gearing.

Indeed, these large machines for producing electricity from power have in late years reached a perfection far beyond that of the steam-engine itself. The steam-engine, in fact, has been forced to a higher development in response to the demands of the electrical engineer.

No service demanded of electricity has taxed the resources of electrical and mechanical engineering so much as that of railway work. The electric motors must work under the most varied conditions, stand the hardest service, and run in the presence of water, slush, mud, and dirt. They must run at all speeds, and be, so to speak, mechanically and electrically invulnerable.

In the same way, the engines and dynamos, together with other parts of the system, must be of the most robust character. Inventive and engineering talent was required to provide for the new and urgent conditions. In the early days of electric-railway work, the prospect was not always bright or promising; and one of the chief setbacks was the enormous wear and tear of certain parts of the machinery,—chiefly those known as commutators. This difficulty was solved by the invention and application of carbon blocks in place of metal "brushes" used with the offending commutators. The "carbon brush" thenceforth became almost as essential to the railway-motor machinery as the carbon stick is to an arc lamp, and did more than anything else to change the prospect of failure into inevitable success. These technical matters make a long story which would be out of place here. They are merely alluded to for the purpose of emphasizing the fact that pioneer work in these advance movements has not been without its trials, and that a glimpse behind the scenes might have disclosed at times a none too rosy aspect.

In spite of the difficulties to be overcome, the electric railway has, in a very few years, put an end to horse-traction on city railways, the cruelties of which—not always to be avoided, perhaps—remain now only as a fading memory. Electric traction has given greater speed, better cars,—which are lighted and heated electrically,—and a resulting cleanliness and comfort not otherwise attainable.

But facts so evident call for no comment. Meanwhile, it has been shown that single cars may be propelled at high train-speeds with comparative safety. Even sixty miles an hour has been exceeded. It has also been proved, by the construction of several huge electric locomotives for the Baltimore and Ohio Railroad, expressly for tunnel service, that such electric machinery can haul the heaviest train-loads and can more than equal in power locomotives worked by steam.

Electric traction is now generally regarded as the ideal method for elevated railways, and as practically indispensable to underground or tunnel traffic in cities. A new underground road is now being constructed in London, which, when completed, will be a splendid example of the latest methods of the distribution and application of electricity to train service.

Indeed, electricity seems destined at no distant day to play an important part in revolutionizing passenger traffic between large centres of population. The facility with which electric service may be superposed on ordinary steam-roads will greatly further this development. The work with the third-rail system, undertaken by one of our prominent railway organizations, has abundantly demonstrated the practicability of such superposition. The future will witness the growing substitution of either single-motor cars, or two or three coupled cars, for long heavy trains drawn by locomotives; and a more frequent service will result. There is an eventual possibility of higher average speeds, since stops will not consume much time, and the time required to recover the speed after a stop will be much less than at present. There will be no annoyance due to escaping steam, smoke, or cinders; no sparks to cause forest or brush fires; no stopping to change engines, nor for taking up water or coal. The locomotive will be supplanted by electric motors driving the axles of the cars as in street-railway service. Cheap fuel can be used to generate the power in the electric stations, and the best conditions for economy of fuel maintained. Where water-power is available within thirty or forty miles, it may be transmitted to the railway line and used instead of power obtained from coal.

The present outlook, then, is most encouraging, so far as electric-railway extension is concerned; and, just as in electric lighting the foundations of present practice were laid fifteen or twenty years ago, so it may be said that the foundations of the railway practice of twenty years hence can be found in the work of to-day. In fact, great enterprises are now being planned and undertaken which will mean much to the future of the electric railroad.

Besides the work which is thus going on, and in which the electrical forces may be publicly witnessed in full operation, there are now other forms of industry in which the part played by electricity is not distinctly evident. Thus, enormous amounts of crude copper are annually refined by electrolysis, with the result that a nearly pure metal is obtained where, formerly, impurities lessened the value of the copper. Not only is this the case, but, in some instances, amounts of the precious metals,

gold and silver, have been separated in the refining, sufficient to pay the cost of the process. This work is all comparatively recent in its development.

The heating power of the electric current is now also utilized in a variety of ways. Electric welding-machinery has been put into service either for accomplishing results which were not possible to be obtained before its development, or to improve the work and lessen the cost.

Here again the part played by the electric current sometimes leaves little indication in the finished product. As an instance, it may be mentioned that the solid rubber tires of carriages are held in place by wires welded into bands by electric welding-machines built for the purpose. Similarly, carriage hardware, axles, wheel-tires, parts of bicycles, parts of machines, tools, and innumerable other articles are made. Metal bands for pails, tubs, and barrels are now largely made by electric welding. Even steel tubes for bicycle and vehicle frames are formed by the same means; and new industries are based upon it. A curious and instructive instance of the adaptability of electric methods to new uses is seen in the annealing of armor for war-vessels. A serious difficulty arose in the application of armor-plate having a hardened face and known as Harveyized armor. It was found almost impossible to drill or cut holes in the face,—an operation frequently rendered necessary in the construction of an armored ship. Various methods of annealing or softening the spots where the plate was to be drilled were tried, with indifferent results. The construction of some of our battleships was delayed on account of this difficulty. It was overcome by a special electric method, with appropriate machinery somewhat resembling that used for electric welding, capable of heating to redness the desired spots in the face of the heaviest armor-plate, and of automatically reducing the heat of the spots so as to anneal them. The heating and control of the cooling is perfectly brought about, in spite of the enormous mass of cold metal surrounding the portion under treatment. Together with electric-welding work, this armor-annealing is a striking instance of the extreme localization of heating in metal, possible only by the delivery of electrical energy and its conversion into heat at the desired point. In electric welding, the electric heat is sharply localized at the weld itself, softening and uniting the pieces; the operation being under the same perfect control as in the armor-annealing referred to. Before the advent of the electric process, iron and platinum only were known as the weldable metals. Afterward, all metals became capable of welding under electric treatment.

Electric heating is now also applied in many other ways. There are to be found electric cooking-utensils, electric sad-irons, electric soldering-tools and similar devices; while many street-cars are provided with electric heat in winter.

The chief bar to the employment of electricity for general heating lies in the fact that in using coal to develop power by steam-engines,—which power in turn is sent out as electrical energy,—85 to 90 per cent of the heating value is lost in the boiler and engine. This loss is so great as to make it undesirable, from the standpoint of cost, to reconvert the electric energy back into low heat, which can be more economically obtained from the direct use of burning fuel.

Besides the technical and industrial development which has gone on so rapidly in the electrical field, the science of electricity, considered simply as a department of physics, has advanced very rapidly. It is but a few years since the late Dr. Hertz gave to the world his experimental demonstrations of the fact that light of all kinds and from all sources is really an electrical phenomenon, differing from ordinary alternate-current waves only in the rate or frequency of vibrations. We produce electric waves of about one hundred vibrations per second for alternating-current work; and in the waves of red light the rapidity is as high as four hundred millions of millions of vibrations per second. Hertz and others used waves of some millions per second, and showed how they could transmit signals to distances without wires; these invisible waves being recognized by suitable receivers. The recently announced Marconi Wireless Telegraph is much the same thing, with certain improvements in detail. It may be of limited use, but will not replace telegraph lines and submarine cables.

Our store of scientific facts has been greatly increased and our electrical theories have been made more precise in late years; while the enormous industrial expansion has furnished the means for researches otherwise difficult to carry on.

Hardly had the work of Hertz and others who followed in his footsteps been assimilated, before the truly remarkable, not to say astounding, discovery by Prof. Roentgen of what he called the X-ray produced a profound impression not only in the scientific world, but upon the general public as well. The interest of the scientist had a different basis from the popular one of disclosure of objects hidden in opaque structures; for he saw in the discovery a new weapon of attack upon the secrets of nature. This weapon has already proved to be so serviceable as to show that his anticipations were not unfounded. The X-rays,

which became at once indispensable to surgery, are the result of electrical actions in certain vacuum bulbs; and the discovery is properly an electrical one.

The rapid extension of electrical application must naturally be of importance in social and economic questions. Changes in our methods give rise to extension of possibilities in the lives of our people. The effect of electric railways alone must be an important study for the economist and social scientist. Fresh questions of law and equity arise out of the conflict of the new and the old.

The increasing importance of electrical work has had a powerful effect upon the development of many other arts. It has stimulated workers in other than electrical fields to the attainment of higher standards, to the improvement of materials and construction, to the bringing out of new products and processes in response to the demands of electric engineering. As a consequence, we have better and more economical engines, improved methods in the casting, forging, and working of iron, brass, copper, and other metals. We have new alloys with special properties, special grades and kinds of steel, improved methods of working such substances as glass, porcelain, rubber, asbestos, mica, etc. In street-railways we have far better rails and rolling-stock.

No existing industry employs a greater range of materials, from the rarest to the most common, than does electric work. None requires or employs such a variety, in character, kind, and quality, of materials, or of treatment of them, to supply daily needs. Nature has been ransacked to discover whatever may possess qualities desirable in electrical construction; and the resources of art and ingenuity have been called to supply whatever might be lacking.

This material progress, coupled with the civilizing and educative influences naturally accompanying it, as well as the many other advances in the application of science to the needs of mankind, will ever remain the crowning glory of the latter half of the nineteenth century.

ELIHU THOMSON.

EXPORTS AND WAGES.

THE ability of nations to maintain an ever-increasing competitive struggle in the exportation of industrial products has been long a question of general interest. And since America has shown herself a strong competitor, the question has become broadened in its significance. In this country, modern industrialism is subjected to the closest scrutiny. The old and the new are set up against one another; methods of work being compared, and the extremes of unrestrained individualism and paternalism tested as to their relative efficiency in bringing about the greatest good to the greatest number.

The prosperity of a country is represented by the amount of wages received by the laboring classes. Is not this prosperity increased when wages are not only higher, but when every unit of wages represents at the same time a higher degree of purchasing power than ever before? An affirmative answer, although apparently but natural, would nevertheless be in exact contradiction to the wage theories which have left their impress upon our time. For a long period, political economists contended that low wages were the only safe basis on which nations could compete for industrial supremacy. The doctrine that wages could not rise without diminishing the profits of capital, and the postulate that rising wages would lead to a withdrawal of capital, and a necessary reduction of the "wage fund,"—with falling wages as a necessary consequence,—were at one time accepted as infallible. A demand for shorter hours, or for an increase in pay, was resisted by the cry, "What will become of our capital? How can we maintain our export trade?"

The history of the factory system shows how the "wage fund" theory was applied. Tender children were worked to death, and cruel taskmasters flogged them to keep them awake during the long hours of their daily toil. No sooner did the law step in to stop these sacrifices to the Moloch of the "wage fund" than the factory owners everywhere proclaimed their impending ruin. They were ruined in every stage in the progress of restrictive legislation—*i. e.*, legislation enacted for the purpose of increasing the safety and health of the workers, of preventing the employment of women and children in mines and dangerous oc-

cupations, and of shortening the number of working-hours. It was argued that if profits were sacrificed by reducing the hours of labor, or by an increase of wages, the "wage fund" would decrease, capital would be withdrawn, and the laborers be left to starve or to emigrate. It was, therefore, an act of self-protection for the latter to submit to such sacrifices as giving up needed hours of rest, and permitting the decimation of their children as a consequence of over-exertion and malnutrition.

It may be asked, by those who regard high wages as a menace to the export trade of their country, whether, in the light of present experience, those employers who resisted the introduction of reformatory measures were so entirely wrong.

What is the situation in England, after forty years of meddlesome reform? Wages have risen to an extraordinary degree: they are, on an average, fully fifty per cent higher than in Germany. "We are not allowed," says the Englishman, "to employ our people more than fifty-four to fifty-six hours per week, while the Germans work sixty-six hours. The results are visible in every shop-window in this Free-Trade country. 'Made in Germany' everywhere stares us in the face, and, like a hideous nightmare, haunts our dreams. Our old markets are filched away from us, while new ones cannot be obtained. Every foot of ground is contested fiercely by these beneficiaries of cheap labor and long hours. Their cheap prints are found on every candy box. Our schoolboys carve their desks with cheap pocket-knives from Germany. Dress goods and hosiery, silks and gloves, Berlin mantles, and toys from Saxony, are everywhere signs of German ascendency and British decadence. In foreign countries, where our supremacy was until recently unquestioned, we meet with the same experience. Germany is encroaching upon our trade, step by step. Yet, after all, this is not the worst feature of the situation. India, built up by British capital, with unlimited hours of labor, and wages at sixpence to a shilling a day, threatens to take away our trade in cotton goods in the East. This trade is the basis of our power. The empire is built upon it. Unless we can maintain it, we might as well prepare for the inevitable, and consent to be a second-rate Power in Europe."

Regarded from this point of view, the policy of the United States Government is perfectly logical. Here, the differences in wages and in working-hours are equalized by a corresponding increase in tariff rates. In order to be on the safe side, *ad valorem* rates are changed to specific duties. The Government assumes that the difference in wages is a permanent one, and that the fate of the working-man should not depend

upon the *ad valorem* of shifting values. It is considered sufficient to put an *ad valorem* duty—the equivalent of two or three times the entire cost of labor—upon goods of European manufacture. In Europe, both the Government and the press lean more and more to the side of the working-classes, who have obtained the right of suffrage, and cannot be repressed, as in former times. They demand a living wage and reasonable hours of employment.

But what of the Chinese and the Japanese? We are all familiar with the low rate of wages in Japan. Our consuls have kept us conscientiously informed on this point. The Report of Consul-General McIvor from Kanargava, April 15, 1895, states that in Yokohama silk-spinners and male weavers earn seventeen cents a day, while female weavers receive about ninety-six cents—two silver yens—per month, or less than four cents a day. Was it not proper, therefore, that Congress should raise the tariff rates on Habutai silk to an equivalent duty of 75 per cent? The foreign cost of the article ranges between 16.8 cents and 35 cents per square yard. If a square yard of silk should be furnished at these prices, the work being paid at the above-mentioned rates, what would become of our own labor? Imagine an American working-man protected by a paltry 45-per-cent duty—the Wilson Tariff rates—competing against labor earning four cents a day. The very idea in itself would be demoralizing to the fund that pays the high wages under which our own silk-workers prosper. From this point of view, 75 per cent is but a moderate rate, which the American consumer ought to pay without grumbling, especially when the fact is considered that Chinese pongee silks are compelled to pay rates running from 240 to 770 per cent.

The Senate was undoubtedly right when it refused to adopt the amendment offered by Senator White, "that the maximum duty should not exceed 200 per cent." These goods are made by Chinese cheap labor, which, as everybody knows, is far worse than that of Japan. The Chinese mode of subsistence is vastly inferior; and their cheap-labor products should therefore be excluded by all means. It is true that the quantities of China silks imported into this country are not very formidable. In the twelve months ending June, 1896, the total imports of silks from China amounted to $266,673, and for the same period in 1897, to $159,298. Nevertheless, possibilities have to be guarded against in formulating our tariff. Labor at four cents a day may at any moment encroach on some other branch of our silk industry.

That the danger is formidable, will become apparent from the following wage lists, compiled from a report on "Money and Prices in For-

eign Countries," made in 1896 by the consuls and diplomatic officers of the United States. I submit it here, together with a list of wages for our own country, taken from a report of the Massachusetts Bureau of Labor:—

AVERAGE RATE OF WEEKLY WAGES PAID BY COMPETING COUNTRIES.

OCCUPATIONS.	Great Britain.	Germany.	Austria-Hungary.	Russia.	China.	Japan.	United States.
Blast-furnace, men	$5.96	$4.28	.....	.....	Unskilled labor 2½ cts. per diem and meals. Skilled labor, carpenters and masons, 20–30 cts. per day.	.....	.....
Machine-making, men	7.80	5.00	$4.46	$3.38		.....	$11.62
Miners	5.57	4.28	.....	.....		.....	.....
Cotton-manufacture, men	6.14	4.03	.....	1.55		$1.05	8.39
" " women	3.71	2.38	.....	1.75		0.56	5.90
Wool and Worsted, men	5.64	.....	.....	1.90		.....	8.39
" " women	3.22	.....	.....	.....		.....	6.05
Boot- and Shoe-factories, men	5.89	4.65	3.64	2.92		.....	12.70
" " " women	3.04	.....	.....	.....		.....	7.88
Carpet-making, men	6.46	4.28	.....	.....		.....	9.10
" " women	2.69	2.38	.....	.....		.....	6.87
Silk-manufacture, men	5.40	.....	.....	2.07		1.05	10.62
" " women	2.45	.....	.....	.....		0.24 to 1.05	6.57

It will be seen that the rate of wages paid by America stands so far above that of every other country, that the claims of those who ask for a tariff sufficiently high to equalize the difference would appear to be well founded.

Protectionism seems, therefore, to be clad in invulnerable armor. There is, however, a rent in the armor. For it is an undeniable fact that Great Britain, a Free-Trade country, pays wages higher by something like 50 per cent than any nation on the Continent; indeed, two or three times as much as Russia, and four times as much as those Asiatic nations which now fill with apprehension the minds of British and American statesmen of a certain school. Furthermore, the products of English mills are carried to every zone. The shippers ask no favors from their government except that they be protected in their legal rights, and no favors from foreign nations except that their goods be taken on their merits. And now, we are told that this supremacy is fiercely contested by the products of "German cheap labor." The following comparison for 1885, 1890, 1895, and 1896, of those exports in which the world's trade chiefly consists will serve to elucidate this subject:—

EXPORTS OF GREAT BRITAIN IN THE FOLLOWING COMMODITIES.

(In thousands of dollars.)

ARTICLES.	1885.	1890.	1895.	1896.
Cotton Piece-Goods	234,592	263,169	219,488	247,160
" Thread	11,504	14,580	15,552	15,765
" Yarns	57,865	60,072	45,198	48,828
" Hosiery and other Ware	10,206	14,094	11,664	13,812
Woollen and Worsted Mfrs	91,611	99,144	95,988	88,516
" " Yarns	21,660	25,563	34,717	34,218
Clothing and other Ready-Made Articles	37,740	40,874	33,728	36,503
Machinery, incl. Carriages, Apparatus, etc.	67,690	111,510	101,660	117,240
Hardware and Cutlery	13,851	13,431	15,566	17,057
All other Metal Products	126,920	183,975	124,445	144,940

The following advance has been made in similar exports by Germany:—

ARTICLES.	1885.	1890.	1895.	1896.
Cotton Piece-Goods	11,136	13,680	15,120	15,110
" Yarns	4,320	4,760	3,974	3,808
" Hosiery	14,160	13,920	16,300	14,040
Wool and Worsted Mfrs	40,960	52,360	47,124	46,320
" " Yarns	8,640	9,056	11,232	10,776
Clothes and other Ready-Made Articles	19,960	28,560	21,120	28,560
Leather Goods	20,640	17,780	15,120	13,804
Gloves	5,040	7,680	6,292	4,498
Machinery, Apparatus, etc.	29,184	38,080	47,514	49,704
Hardware, Cutlery, etc	36,960	46,080	48,552	56,401
All other Metal Products	27,602	34,800	38,318	43,078

If Great Britain has suffered decline, it is not apparent that the dreaded low-wage country has gained correspondingly. Indeed, indications of a decline in English exports are only observable in cotton goods, yarns, coarse iron and steel products, and only in 1895 as compared with 1890: in 1896, the loss on cotton goods is nearly retrieved. Moreover, it should be borne in mind that the average price of cotton in 1885 and 1890 was about 11 cents; whereas, in 1895 and 1896 it was but 7½ cents. The decline in the coarser iron products is very marked; but this item is very much influenced by trade conditions, and therefore subject to great and sudden fluctuations. The year 1890 was a boom year in the prices of iron in England. Between the months of August and December, 1889, the prices of iron in England rose over 100 per cent; and this high rate was maintained throughout 1890.

In products of the highest finish, we see that the trade of 1895 exceeds that of 1885 by fully 50 per cent; while, in 1896, an excess of more than 74 per cent over 1885 is observable. In wool and worsted manufactures, as well as in yarns, the figures of 1895 were surpassed only during the prosperous years of 1871–73. We must remember that, at that time, the average price of Colonial wools was £26.0.0. per sack; while, in 1895, it was only £12.1.0. Having demonstrated England's superiority in the principal articles of export, I shall pass over the smaller items of haberdashery, millinery goods, clothing, etc., where some slight shrinkage is discernible, and briefly glance at Germany's figures.

It is scarcely necessary to dwell on the special items in the table. Aside from the manufactures of metals, there is a surprising absence of facts to warrant the fear of "foreign cheap labor." In leather goods and gloves, haberdashery, clothing, and wares of a similar kind, wherein Germany has always possessed a leading advantage (as these goods are less subject to the influence of machinery), we note decline from the figures of 1890. In machinery and apparatus of all kinds, as well as in superior articles of metal manufacture, the progress shown in the figures of 1890 over those of 1885 is maintained in 1895, and in the first-named branch, considerably exceeded. As the British trade figures show expansion to a much larger degree, it cannot be said that Germany's gain was made at the expense of England's trade.

I have compared the exports of England and Germany; and I do not consider it just to draw France into this comparison. The wares of France are not gauged by cheapness alone; for taste cannot be measured by the yard nor weighed out by the pound. But Austria-Hungary, as a rival of Germany, is certainly worthy of consideration. From the wage point of view, her Oriental trade should greatly exceed that of Germany or England. The facts, however, do not bear out this hypothesis. The total exports of Austria-Hungary for 1895, in the principal lines of manufacture, were as follows:—Woollen goods, $7,134,800; gloves, $8,582,800; leather goods of all kinds, $5,311,200; hardware, clocks, etc., $10,442,400; iron goods, etc., $4,969,200. The "economy of low wages" does not stand the test in the crucible of foreign trade. Indeed, if the preference given to a trader's goods in neutral markets be a proof of their cheapness, then the above figures would prove that the rate of wages stands in an inverse ratio to the price of the product. While Protectionists will be disposed to deny this proposition, they cannot refute the statement that our own export trade in manufactures

has increased within recent years, without material interference with the high rate of wages paid. The expansion of the American export trade has been greatest within the last two years. As wages have not been reduced, improvements in the economy of production can alone be made answerable for the satisfactory results.

EXPORTS OF MANUFACTURES OF COTTON (IN THOUSANDS OF DOLLARS).

MANUFACTURES.	1885.	1890.	1895.	1896.	1897.
Piece-Goods	10,150	8,366	10,470	12,958	17,281
Other Manufactures	1,686	1,632	3,310	3,879	3,756
Total Cotton Manufactures	11,836	9,998	13,780	16,837	21,037

If I had to rely upon the item of cotton goods alone, in order to prove the progress of America as an exporting nation of manufactures, I should not have the temerity to rush into print on the subject. At best, the wage part in American cotton goods, which are mostly of the coarser kind, is but one-fourth; while the material represents three-fourths of the cost of the goods. My argument, however, finds its strongest support in the fact that our exports have grown to four times the largest figures ever attained in cotton piece-goods,—manufactures in which labor may be reasonably said to constitute seventy-five per cent of the cost. No better proof of the industrial development of the United States can be presented than that embodied in the first table on the following page, which includes some of the leading articles of our export trade during the last ten years.

This table deals largely with articles the labor on which represents nine-tenths of the value of the product. It is true that, in these articles, America had a fairly good export trade prior to the year from which my comparison dates. The progress, however, which has been made during the last ten years is truly phenomenal. In machinery we had already in 1891 trebled the exports of 1886; and in 1897, we doubled the figures of 1891. During the year beginning July 1, 1895, and ending June 30, 1896, our exports in machinery amounted to $18,127,128. During the calendar year ending six months later, they rose to $22,513,000. And, by the end of the fiscal year ending June 30, 1897, they had advanced to $26,102,000. Particularly remarkable is the rapid growth of our trade in bicycles. During the fiscal year 1896, our sales in this department amounted to $1,898,012. The amount was increased during the calendar year of 1896 to $3,796,000;

and during the fiscal year ending June 30, 1897, it advanced to $7,005,323. What makes this matter especially irritating to the adherents of the low-wage theory is the complaint of Germany, that American bicycles seriously interfere with the output of the home market. High duties are demanded in order to protect the industries of the fatherland from this new and sudden danger. In these two items, machinery and bicycles, the export trade of America has, within one year, advanced from $22,000,000 to $33,000,000.

ARTICLES.	1886.	1891.	1896.	1897.
Agricultural Machinery, etc.	2,367	3,219	4,644	5,241
Carriages, Cars, etc.	1,928	4,911	2,747	2,946
Clocks and Watches	1,366	1,580	1,659	1,770
Instruments and Apparatus	480	1,576	2,717	3,054
Lamps and Chandeliers	546	509	730	711
Musical Instruments	871	1,326	1,269	1,277
Sewing Machines	2,585	2,869	3,051	3,340
Other Machinery	4,469	13,425	22,513	26,102
Scales and Balances	281	318	377	382
Cycles, entire or in parts			3,796	7,005
Totals (thousands of dollars)	14,893	29,733	43,504	51,828

In other finished articles in the metal line, our growth has not been less rapid.

ARTICLES.	1886.	1891.	1896.	1897.
Brass Manufactures	150	297	1,026	1,171
Copper "	109	190	819	910
Cutlery	112	146	188	178
Builders' Hardware, etc.	2,466	3,858	6,140	6,627
Nails	298	440	821	877
Wire	335	860	1,788	2,243
All other Manufactures	2,480	4,235	8,497	9,438
Totals (thousands of dollars)	5,950	10,026	19,279	21,444

We can make comparisons only by totals. To enter into details would extend this article beyond the limits set for it. The figures are sufficiently explicit to enable the reader to see the commanding position America has reached within a few years, in the world's market, in products the labor on which constitutes the chief part of the cost. On many of these products the American wage rate is fully 50 per cent higher than that of Great Britain, and 150 per cent higher than that of Germany and Austria, where longer hours prevail. There is further evidence that well-paid labor can beat cheap labor on its own grounds.

In 1887, I was charged by the Secretary of State, Mr. Bayard, with an inquiry into the state of technical education and the economy of production in Europe. The mining, iron, and steel industries offered an interesting field for study. I made an examination of the works of those concerns which were reputed to be the best equipped. Starting with the ores and coal, and proceeding to the coking, the furnace-work, and the conversion of the iron into steel rails, I found that the total combined labor cost in America did not exceed the labor cost in England, although the earnings per diem in America exceeded by 50 per cent those of Englishmen engaged in the same occupations. The only exception I found was in the blast-furnace-work. This, however, was balanced by the lower cost of the labor involved in mining the ores and coal, and in coking; the cost of converting the iron into rails was about the same. Bessemer iron in the United States averaged about $21.00, and in England about $10.94 (45*s*) for the year; steel rails in America averaged $37.00 against $20.66 in Middlesboro. The difference between the cost in the two countries lay in the freight charges from the mines to the works, and in the profits.

That these latter must have been considerable in the year referred to, is proved by the fact that Bessemer iron in the three succeeding years averaged about $18.50, and steel rails about $30.00. That the writer was correct in his statements is apparent from the trade facts of to-day. The price of Bessemer iron is now about 5*s* higher, and of steel rails about 20*s* higher in England than it was then. The price of Bessemer iron near Pittsburgh is at present $9.50,—less than half the price ten years ago. The cost of steel rails is about $19.00,—a little over half the figure of 1887. Furthermore, Southern Foundry Iron No. 2 has been for some time selling at the furnace in Birmingham, Ala., at $6.50. At the same time Cleveland iron sells at Middlesboro, England, at 40*s* ($9.72). At that price, Southern iron could be landed in England, freight paid, and still leave a profit. The trade has not been slow to avail itself of this circumstance. Under an increasing demand, the price has lately been raised to $7.00; and England promptly responded by increasing it to 42*s* ($10.20). In 1887, the same quality of iron was sold at 33*s* ($8.04), and in 1886, at so low a figure as 26*s* ($6.34).

To-day the positions are reversed. The control of the iron markets of the world has passed to America, the high-wage country. The exports are rapidly increasing. Booms may intervene and raise prices to an extent that will interrupt a gradual and systematic development; but the fact remains that Southern iron leaves a profit at $7.00, Bessemer

iron at $10.00, and Bessemer rails at $18. Increased production follows rising prices; and however high these may temporarily be carried at home, under a tariff which places the consumer at the mercy of a few grasping individuals, a ready market can always be found on foreign shores, if only to ease the home market.

That this is an achievement of the last few years will be seen from the following tables of American exports:—

ARTICLES OF EXPORT.	1886.	1891.	1896.	1897.
Pig Iron, Tons.....	7,659	13,435	29,862	168,890
Bar Iron, "	691	1,091	3,587	3,529
Hoop Iron, "	261	92	226	391
Ingots, etc., Steel, "	125	272	2,722	519
Plates and Sheets, "	321	597	1,318	4,492
Rails, "	3,969	15,881	27,645	112,072

Another item of export, copper, may be added here. We heard a great deal in former years of the necessity of a good, stiff duty on copper, to keep away the products of "pauper labor" countries. The duty on copper under the tariff of 1883 was four cents a pound. It was reduced to one and three-fourths cents by the tariff of 1890. The fact, that copper was sold for export at considerably lower figures than for home consumption, could not be concealed. The producers did not put in a claim that they would perish if high rates were discontinued. The Wilson Tariff put copper on the Free List; and, strange to relate, there was one infant industry that did not send its delegates to Washington in the spring and summer of 1897 to labor toward remedying the blow struck by wicked Free-Traders in 1894. Copper remained unprotected —and it prospers. The exports have been increasing at a wonderful rate, as is shown by the following table:—

EXPORTS OF INGOTS, BARS, AND SHEETS OF COPPER.

1886.....	24,239,258 lbs.	$ 2,493,898	10.3 cents per pound.
1891.....	34,600,985 "	4,424,463	12.5 " " "
1896.....	175,580,762 "	18,644,407	10.6 " " "
1897.....	279,393,807 "	30,711,597	11. " " "

The expansion in the export trade begins with 1894, the year in which copper was put on the Free List. In 1893, the exports were only 37,642,464 lbs., at a valuation of $4,187,510 (11.1 cents per lb.); in 1894, however, they reached the high figure of 195,047,642 lbs., at a

valuation of $19,242,370 (9.66 cents per lb.). That this reduction in price was not caused by the change in the tariff, is apparent from the higher figures obtained in 1896, and the largely increased exports for 1897, at a price as high as that of 1893. Nor has this advance been made at the cost of the wage-earner. An exhibit of the Quincy Copper Mine on Lake Superior, of which I here avail myself, shows a continuous working from 1864. Beginning with 1870, we notice a tendency to a rise in wages. For that year, the average monthly earnings of miners on contract work are given at $46.09; in 1875, at $46.74; in 1879 (in consequence of the long depression of the preceding years), they fall to $38.76. Owing to the active demand of 1880, however, they advance in that year to $49.70, and remain at about that figure during 1881 and 1882. By 1885, they have fallen to $44.00, but are up to $49.15 in 1889; in 1890 reach $52.60; and in 1894, notably a year of depression, the earnings amount to $50.70, despite the fact that the selling price is lower than in preceding or following years. Nor is this satisfactory showing obtained at the cost of the capitalist. The profit divided among the shareholders, on a product of 15,484,014 lbs., amounted to $400,000, which is equal to 2.58 cents on each and every pound, at an average selling price of 9.5 cents.

Coupled with this is the interesting fact, which alone explains the phenomena, *that the cost of production has been steadily reduced since about 1878.* It was 14.90 cents in 1870; 15.79 in 1875; in 1878 it stood at 14.01 cents; in 1881 it fell to 10.03; in 1885 it was 7.50 only; in 1890, 6.51 cents; and in 1894 it sank to 5.68 cents per pound. The large export figures for 1897, combined with the marked increase of price as compared with 1894, can have but one meaning: either larger profits, or higher wages, or both. Upon the whole, it will be seen that an export trade in industrial products does not necessarily involve a sacrifice of profits or a reduction of wages. On the contrary, by steadying the outlet, it prevents the decline in wages in periods of depression, and the extinction of capital earnings,—features so destructive to many of our tariff-coddled industries.

Apart from the sudden increase in price, so frequent in America, there is but one danger to our export trade to be apprehended from recent tariff legislation; namely, retaliatory measures. The new tariff exercises the severest pressure against those countries which have become our best customers in manufactured goods. The excess of exports in cotton goods during 1897, as compared with 1896, was entirely absorbed by Canada, China, and Japan. The excess to all countries amounted to

$4,323,000. Of this, the amount absorbed by Canada was $586,000; by China, $3,260,000; while the remainder, $1,256,000, went principally to Japan. The growing demand of Japan, the dreaded low-wage country, for the products of our iron-mills and machine-shops may be regarded as a tribute to the country, whose industries are based on the economy of high wages; and the value of this tribute becomes enhanced when we consider that it has been obtained in close rivalry with England and Germany. It demonstrates that our foreign trade can neither be interfered with, nor interrupted, because of our higher wages.

The principal menace to our industrial prosperity must be sought in that one-sided legislation—the more reprehensible, because entirely unnecessary—which has been instituted in answer alone to the clamor of a few selfish interests, jealous of the limited importations which might interfere with their trade. It has been claimed that the Tariff Act of 1894 was not protective, and that it exposed American industries to a competition destructive to the wage-earner. To this argument, the labor statistics of Massachusetts furnish a strong refutation:—

AVERAGE YEARLY EARNINGS IN THE CHIEF INDUSTRIES OF MASSACHUSETTS.

INDUSTRIES.	1891.	1893.	1895.	Average Number of Employees.
Boots and Shoes	$504.39	$496.38	$487.86	35,741
Cotton Goods	343.78	343.29	329.78	77,341
Machinery	555.98	544.94	534.48	15,277
Metallic Goods	508.20	507.29	515.16	11,343
Paper and Paper Goods	428.80	411.42	408.83	10.470
Woollen Goods	378.54	370.31	373.11	15,176
Worsted Goods	373.74	354.28	356.96	11.548

In the branches here enumerated, nearly two-thirds of the employees in all the factory industries of the principal manufacturing State of the Union are represented. Scarcely any difference is observable between the earnings in 1895 and 1893. Even 1891 shows but small percentages over 1895. The greatest difference is perceptible in the boot and shoe trade, in cotton goods, and worsteds,—3.37, 4.7 and 4.55 per cent respectively. There is no decline whatsoever in the wages on woollen goods—a department of our industry upon which the tariff had been reduced to 50 per cent—after raw wool had been put on the Free List.

But how are these results reached? How can high wages and low prices be maintained against the rest of the world? In illustration, one example from the cotton industry will suffice.

During my European investigations I found that a weaver on the Continent usually ran two looms, but rarely three; while in England, the expert weaver in print-cloth usually limited himself to four. In America, I found that an expert weaver managed eight looms; and the feasibility of working with ten was under consideration at the time my investigation was made. To-day, by an improvement in the shape of the "Northrup" loom, twenty-four looms can be run by a skilful operator; and in a number of mills as many as twenty are actually being run by a single workman. The manager of a prominent print-cloth mill recently told me that he had put a thousand such looms into his mill, and was running them at an average of fourteen looms to a weaver.

In the summer of 1894, while the revision of the Tariff was under discussion, I collected certain data for the chairman of the Senate Finance Committee, in order to ascertain whether the rates on piece-goods still showed the differences which existed in 1887. The answer received from England was to the effect that the price was 44 cents per 100 yards for weaving cloth 28 inches wide. The answer from Fall River was that 36 cents was being paid there for the same cloth per 100 yards. The price for weaving had been reduced in both countries; but the difference was still about the same as in 1887,—say 20 per cent in favor of America. Higher wages and lower labor cost may seem an anomaly from the traditional point of view. Our own experience shows, however, that the cost of labor depends upon the output, and that a low cost can well be maintained at a high rate of wages, provided the product is correspondingly increased, either by a greater exertion of the worker, or by improvements in organization and in mechanical appliances.

The improved and high-speed machinery in America requires a class of workmen superior to that employed in low-wage countries. That the superior results, which show themselves so prominently in the exporting of the products of our mills, require great exertion, is self-evident. That this can be maintained only by a correspondingly high standard of living on the part of the worker,—*i. e.*, high wages,—is equally self-evident. The higher wages which our workmen receive, however, do not materially affect the price of our goods in industrial competition; for adverse conditions are more than equalized by our greater output. Considered from this point of view, a narrow and restrictive policy is not only reprehensible, but thoroughly un-American.

JACOB SCHOENHOF.

THE RECONQUEST OF NEW YORK BY TAMMANY.

At the November election of 1894, the citizens of the city of New York, under the leadership of the Committee of Seventy, wrested from Tammany Hall the control of government, and elected as mayor a gentleman of good repute as merchant and bank president. The legislature armed this officer with all the needful authority promptly to remove the appointed heads of the departments which had previously been filled by Tammany adherents, and to place others in their stead. With the exception of the head financial officer of the city, all or nearly all, the old chief officials of the city government were changed by the newly elected mayor; and the Tammany organization, which had been responsible for the officers in power, was thus stripped of all patronage. Then was inaugurated what was supposed to be a new era in municipal administration of efficient, honest, and faithful public service.

An investigation before a legislative committee had proved the administration of the Police Department of the city under Tammany rule to be lamentably corrupt. It had also proved the administration of justice by the lower tribunals having criminal jurisdiction to be lax and in sympathy with the Police Department; and, though it was not directly demonstrated, it was generally believed that a like inquiry into other departments administered by the adherents of the Tammany organization would have resulted in a like display of inefficiency and maladministration. The escape of the citizens of New York in 1894 from the thraldrom of bad government almost tempted them to proclaim Election Day thereafter as an annual special holiday, like Evacuation Day, which commemorates the removal of the British troops from New York soil. Yet, in the short period of three years, that same Tammany organization, banded together in the main for the purpose of maintaining its members directly and indirectly by public office and from the proceeds of compulsory taxation, and under the same leader and general officers, triumphantly returns to power by a plurality over the candidate of the Citizens' Union of 82,457 votes; its total vote of 233,997 representing nearly a majority of all the electors of the greater city as created by the new charter.

This result, accomplished by Tammany without the element of patronage to assist it, would seem to confirm the views of those who look with distrust upon democratic institutions,—particularly in their application to urban populations,—and would seem to support the disparaging opinions as to the intellectual and moral condition of the New York electors expressed by so reputable and high an authority as the London "Economist" in its issue of November 6 last, which says:—

> "It is perfectly vain to talk about remedies. There is no remedy for a bad democracy except its conversion to a better mind; and nobody knows how that is to be effected."

That periodical sums up with the remark that a majority of the electors not only represents the community, but, for all purposes of collective action, is the community itself, and adds:—

> "If New York has deliberately chosen a corrupt government, as is alleged, New York, be the cause as it may, is itself corrupt. . . . It is nonsense to say, as Americans say, that England is greedy, and France vainglorious, and Germany given over to militarism, and then to say, in the same breath, that New York is a respectable city because only the majority sanctions disreputable things. What city or state is there on earth, even in Africa, in which the minority is not comparatively decent and well-intentioned?"

These views, in so far as they imply a deliberate preference for Tammany rule, are deplorably wrong. Had the municipal election of three years ago gone amiss, there would have been ground for such criticism, which is not justified by the loss of the election of 1897.

The causes of the reconquest of the city of New York by Tammany in 1897 will be found in the history of the economic and political conditions of the city during the three years of Mayor Strong's administration, in the State legislative proceedings during those three years, and in the use which was made by the citizens of New York and by the city administration of the opportunities for better government afforded by the election of 1894.

The tax-rate in the city of New York, which is mainly gathered from real estate, both improved and unimproved, was, during the last year of Tammany administration, $1.79 per $100. This was a large enough exaction from the thrifty and industrious part of the people, whose moneys are invested in real property, and who had the well-grounded expectation that the savings which would be occasioned by the bank president's administration of the affairs of the city, as against the Tammany administration,—particularly as he was free from obligation to any

organization for place and power,—would result either in a considerably lower expenditure of money and thereby in a reduction of the tax-rate, or in an enormous increase in the efficiency of all the departments at no greater expenditure. In this expectation, the citizens of New York were lamentably disappointed. During the first year of Mayor Strong's administration, the tax-rate went up to $1.91, though the assessed valuations of property had increased $13,615,625. The debt increased $6,672,165. The charge was made that the increase of the debt was due to Tammany having, in order to make it appear that the Reform administration was extravagant, artfully delayed the issue of bonds and thus accumulated a floating debt which had to be provided for by such bond issue in the first year of Mayor Strong's term.

Were that charge true, it would account for the increase of the funded indebtedness in the year 1895; but it has been disputed, and has been shown to be true only to a very limited extent.

Whatever the facts may be as to 1895, this charge does not excuse or explain the large increase of the debt in the two subsequent years. The increase in 1896 over 1895 amounted to $8,260,505, and in 1897, to November 30, amounted to $8,310,832 over that of 1896. Furthermore, this matter of debt represents expenditures in addition to the general budget of the various departments for each year. The increase of these ordinary expenses in years of great financial stringency and distress in almost every department was a sore and serious disappointment to the taxpayer, because he argued, in the rough and tumble fashion of popular logic, that either it was true that the prior Tammany government was an extravagant and a dishonest one, and that therefore the amount of expenditure in these departments was ridiculously in excess of actual needs; or it was not true, and that the money expended by them was a necessary expenditure; or, as a third alternative, that the new administration, from which so much good was hoped, was, for some cause too occult for him to understand, incapable of affording relief.

The second year after the Reform administration came into power, the tax-rate rose to $2.14, the assessed valuation of real and personal property having been increased $89,537,243 over that of the previous year, and $103,152,868 over 1894,—the last year of Mayor Gilroy's administration. During the third and last year of the Reform administration, the tax-rate was $2.10, though the assessment had been increased $62,150,951 over that of 1896 and $165,303,819 over that of 1894. This rate was fixed upon despite the fact that during those three years the actual values of property had, through the erection of huge office-

buildings, been more largely increased than during any previous period in the history of the city. Such legitimate increase of the basis of taxation should have reduced the average tax-rate.

What should have been done immediately after Mayor Strong came into office was to appoint a commission to investigate every department of the city government, with the view of reducing the number of officials necessary to accomplish the work in hand, by the discharge of many who held sinecures or quasi-sinecures at large salaries. The legislature and the city government had for years vied with each other in multiplying offices so as to strengthen the political organization in power, or, when the party in control of the State differed from that in the city, in adding to such offices so as to divide, between the party in control of the State and the political organization in power in the city, the incumbency of the new offices thus created. It was the duty of the Reform administration to get rid of all these useless and expensive additions of office-holders and clerical force, to make an official day of actual labor in the public offices six or seven hours instead of three or four, and in every way to diminish and reduce the expenses of the various departments of the city of New York to reasonable business limits. This should have been done. What was done was to put into every office originally created for mere purposes of expenditure a follower of one of the factions or organizations which made up the army of the Reform movement of 1894; to increase instead of diminish many salaries in the departments; and to make a more lavish distribution of public moneys for new construction of highways and buildings than had theretofore been made.

Another duty of the Reform administration was to exercise a most rigid economy so as to make the people feel that the affairs of the municipality were conducted upon strictly business principles and without fear or favor, and thus to accustom the public mind to the receipt of full value for the exactions by way of taxation imposed upon the public; thereby sharply differentiating the new administration from everything which, for a number of years preceding its advent, had been in operation. This duty was particularly strong in bad business years.

The rapid-transit underground work was in contemplation, and steps had been taken to make it a fact, when Mayor Strong entered office. The work could obviously only be carried forward, under the law, if the city was careful not to overstep the limit of its constitutional debt-creating power after including the amount necessary to accomplish this great purpose as part of the debt. Yet, during the years of the Reform

administration a large number of other improvements was undertaken at great cost. The Dock Department received millions of dollars for improvements of the water-front. This was doubtless a sound economic investment, and probably will ultimately yield a larger return than the expenditure incurred. From some points of view, it is free from adverse criticism; but from another point of view it is subject to the following criticism, which may fairly be made. Under the contemplated rapid-transit scheme, to carry out which the payment must be made out of an issue of bonds within the constitutional debt limitation, it was the duty of the city government to see to it that there should be no increase of the debt (even for expedient improvements if they could be delayed), which might by any possibility interfere with the success of a method of cheap and rapid means of transit other than the surface-roads and elevated railways. And all schemes such as dock improvements, the buildings of additional bridges over the Harlem River, such as that at 145th Street, but ten or twelve blocks from the new Macomb's Dam Bridge; the laying out of a great number of driveways in the annexed district, at a possible expenditure of $5,000,000; the asphalting of many of the streets of the city, should have been delayed until the much-needed relief by rapid transit had been accomplished. So that the point which will ultimately have to be determined by the courts is now already mooted, whether, since the rapid-transit question was presented for popular adoption, the municipal debt has not been already so much increased, in the issue of bonds for other purposes during the past three years, that the money needed for this great improvement is no longer adequately available to the city.

A municipal household has to be conducted very much like a private business. The necessary expenditures should be met first; and each expenditure should have a relative importance to all the others. It is no justification to say that an expenditure is useful when, because of it, a very much greater boon to the community must be postponed. It will be a great check to the prosperity of the city of New York should its citizens for many years be deprived within city limits of true rapid transit, from which so much in the way of comfort and addition to values has been hoped for.

It is true that in one department of the city administration—that of Street Cleaning—owing to the happy selection of its head officer, a degree of efficiency was attained theretofore unknown in the city of New York; also that the administration of the Police Justices' Courts was raised in dignity by the selection of a higher order of incumbents.

Had the superior efficiency in the street-cleaning work been attained without the expenditure of an additional dollar beyond what the Street-Cleaning Commissioner had at his disposal when the department was under Tammany rule, it would have been a rather complete demonstration of both the corruption and inefficiency of Tammany, as compared with the work of a Reform administration. It did, however, involve an expenditure for the past three years of an average of about $500,000 per year more. No one begrudges that expenditure, because it produced a markedly beneficial result.

The same thing is true of the Department of Education. It would have been a fine object-lesson if the removal of the public schools from improper influences, and their conduct upon a high plane of efficiency and up-to-date educational requirements, could have been had at an expense no greater than that which had been indulged in under the waste and knavery of Tammany rule. But the superior efficiency of the schools was attained at an expenditure in 1895 of $266,770 in excess of that made in 1894 by Tammany; in 1896 of $1,028,887 in excess of that made in 1894. In 1897, the appropriation was $1,437,501 in excess of the expenditure of 1894. This, without counting additions to expenditures provided for by bonds. The citizens of New York would have found no fault with these expenditures if in other departments corresponding savings had been made, because they argued that if 20 per cent of the $34,000,000 theretofore annually expended by the city, exclusive of the interest payable on the public debt and New York's proportion of State taxation, was wasted under Tammany control, there should have been a saving of almost $7,000,000 a year, out of which these beneficial additional expenses for education and cleaning public highways could have been made, and still leave $4,000,000 to go to the credit of the taxpayers and in reduction of their taxes. The expenditures of public moneys in the various departments during the three years of the term of Mayor Strong, who stood before the community for decency as compared with the professional politicians banded together under the name of Tammany, were, with some few exceptions, as large as, if not larger than, in the years which had preceded his incumbency.

Furthermore, a set of non-economic, socialistic, and philanthropical tendencies, involving considerable expenditure of money and great irritation, was let loose upon the community with the inauguration of Mayor Strong on January 1, 1895. There is probably no other city in the world with a less homogeneous population than that of the city of New York. There is probably no other place in which the demands for

helpfulness and charity are so numerous, and where, on the whole, they have, from the humanitarian side, been so faithfully listened to and answered as in this self-same city of New York. There is probably no other city where there is so large a dependent and defective class. There are few cities in civilized countries where there is a larger delinquent and dangerous class. With the latter, the public arm, through the administrative machinery of criminal justice, is called upon to deal. The duty of dealing and caring for the dependents and defectives is divided among three classes: (1) Where the defectives or unfortunates belong to a family of well-to-do people, or where there is an active producer who earns beyond his own needs and who is imbued with a high sense of duty, such defectives and unfortunates are taken care of without calling upon organized private or public charities. (2) Where the deserving poor or unfortunates and defectives have racial or denominational ties, they are taken care of by the denominational and private charitable institutions which depend upon voluntary contributions and endowments for their support. (3) Where the unfortunates and defectives have no such advantages or claims to bring them under the foregoing categories, and may be termed "nobody's poor,"—which means everybody's poor,—they must fall, and should properly fall, under the care of the general taxpayer and be a charge upon the public treasury.

It is in the interest of civilization that as little as possible of charitable work should be done at the expense of the taxpayers, because the public officials have neither the machinery nor the thoughtfulness to discriminate properly as to the objects of charity, and the result of such work is usually degrading, and necessarily so, to its recipients. The amounts expended by most producers, of kindly disposition, in strictly private and coöperative private contributions, together with their annual subscriptions to the privately organized charities, equal sums which at times raise the question in the minds of the thrifty and provident whether self-denial pays when so much of the proceeds of the self-denial goes to those who are thriftless and improvident. Yet all this is, to a large extent, a voluntary burden, and has a tendency, morally, to improve the giver; but when, in addition to this, there is imposed a constantly increasing expense by way of taxation to provide for an enormously large class of people defective and deficient in industrial capacity or morals, and for another large class of unthrifty and reckless persons, it is incumbent upon the city administration to see to it that that burden shall not be so excessive as to take from the provident, thrifty, and useful members of society, by a socialistic distribution of their means, an un-

reasonably great part of the reward of their virtues. It is no answer to the criticism here made to say that charity, like mercy, is twice blessed, —blessing him that gives and him that takes. By all this is implied *voluntary* charity. The charity extorted by the tax-levy can scarcely be called "twice blessed"!

Immediately after Mr. Strong's administration commenced, the professional philanthropists attempted, with varying, but on the whole considerable, success, to shift upon the public treasury a portion of the burden borne by private individuals in taking care of the dependents; so that although the State had relieved the city from the care of the insane poor, the expense of which formed a considerable proportion of the total outlay for charities, yet, on the whole, at the end of the year 1896, the two departments of Charities and of Correction, which took the place of the one department theretofore existing, had expended, notwithstanding prior waste and extravagance, about as much as under Tammany rule. In addition there has been expended from the public purse upon private asylums, reformatories, and charitable institutions a sum in excess of the $1,275,426 spent in 1894 under Tammany rule; viz., in 1895, $1,314,654; in 1896, $1,302,217. In 1897, the sum of $1,527,051 was appropriated for the same purpose.

The story on the financial side is, after all, told by the city's total expenditures (exclusive of assessments), which were in 1894, $38,395,094, with an increase for every year from that time until it reached $48,229,555 in 1897, estimated by the appropriation for that year, which was an increase of almost $10,000,000 since 1894. From this there should in fairness be deducted an increase of about $2,500,000 in the State taxes and about $400,000 for increase of interest on public debt; making an increase of about $3,000,000 which is independent of the budget on household account. Deducting this $3,000,000 from the $10,000,000, there is an increase of about $7,000,000 in the general expenditures. To this should be added the very serious consideration of the increase of the public debt during these three years. The net debt of the city at the close of 1894 was $105,777,855; at the end of 1895 it was $112,450,020, being an increase of $6,672,165; at the end of 1896 it was $120,710,525, being an increase of $14,932,670 over 1894; and at the close of November, 1897, it was $129,021,357, or a total increase of $23,243,502 during the three years of Mayor Strong's administration.

These figures, showing the basis of the citizens' disappointment at the administration of Mayor Strong, can by no means be interpreted as a defence of Tammany. No one doubts that the control of the city by

Tammany was accompanied by flagrant misrule; and it is especially unfortunate, therefore, that no serious effort has been made to prove that it was so, by the introduction of economy and by reducing such elements of expenditures as were not absolutely essential to the public weal,—thus bringing home to the public mind the great advantage of placing the government in the hands of citizens organized otherwise than as regular political parties. So much was expected in this regard from the Strong administration, and so little performed, that a condition of resentment was aroused in the public mind which did much to defeat the citizens' movement of 1897, that was so earnestly undertaken and carried forward with such a vast expenditure of labor and energy, and which on its merits was so deserving of success.

Inspired by the success of the legislative investigation conducted by Mr. Goff and the reputation thereby acquired by him, quite an aimless lot of investigations of simple and minor social abuses were set in motion. These efforts were directed to the object of making people, by force of law, thoughtful, considerate and kind to their fellow-beings. The laws following them resulted in interfering with people in the conduct of their business, and produce considerable irritation.

New building laws were enacted;—improvements no doubt on those theretofore existing;—but they were enforced with a rigor previously unknown, and with such strictness that many builders of tenements and second-class apartment-houses, whose motives were unquestionably of the highest character, abandoned the idea of constructing tenements; thus depreciating the values of property in this city. These laws and the manner of their enforcement added much to the general irritation.

Before the Strong administration, the heads of the city government answered the charge of extravagance by the excuse that the expenditures were imposed by legislative enactment. Some of the expenditures are still remnants of that condition; but, simultaneously with the inauguration of the administration of Mayor Strong, there came into force a constitutional amendment which subjected any bill involving expenditures by the city government to the Mayor's veto, reserving to the legislature, however, the right to pass the bill over such veto. The expenditures involved since 1894 in such legislation met with the approval of the Mayor, and are fairly chargeable to the outgoing administration.

It may from the foregoing be therefore justly said that from the economic side the administration inaugurated in 1895 has not been a success. It was still less of a success from the political side. Early in the year 1895, the legislature passed a bi-partisan police bill which was

of such character that it aroused the adverse criticism of almost every conservative element which aided in the election of Mr. Strong. It continued in force that feature of police management which theretofore had divided responsibility and aided corruption. It was, in the opinion of experts, worse than the law for which it was substituted. It was approved by the Mayor.

The passage of the Greater New York Bill carried with it the possibility, which is now an actuality, that for a number of years the great powers of taxation and appropriation of public moneys in the city of New York and the surrounding districts might be handed over to a sinister organization, and that it would, in any event,—even under favorable political results,—operate injuriously upon the finances of New York City, as constituted before consolidation, for the benefit of the neighboring towns and congeries of population. The injury was inflicted for no other ostensible purpose than merely to add to the numerical count of the citizens of New York. The Bill was permitted to be advanced and its active promotion was participated in by the Mayor, who gave no warning to the community as to the possible effects of the measure. After the report of the Charter Commission, and when the passage of the Bill was imminent, every conservative interest in the city of New York was awakened to the danger then impending, and made protest against its enactment; but no sign of coöperation to save New York City from such a danger came from its chief executive.

When the Bill was passed by the legislature, the Mayor, after a hearing upon it before him, declined to sign it, basing his objection on some minor points; but his opposition came too late for any effective purpose, and the Bill was repassed over his veto by practically the same vote that had originally passed it.

The Commission to draft the Greater New York charter seemed to recognize the fact that without minority representation in the municipal legislative boards, the Greater New York experiment would be dangerous. They expressed a doubt, however, about the constitutionality of such a provision—in my opinion an unjustifiable doubt—and yet, despite its importance in the scheme of government, no serious effort was made, either on their recommendations or by the city authorities, to postpone the adoption of the charter until minority representation could be constitutionally secured in the Boards of Councilmen and Aldermen, so that should the city be recaptured, as it has been, by Tammany, a very substantial proportion of political power could still be retained by the better class of the citizens of New York. The matter was disposed of

by the Commission, of which the Mayor was a member, by a recommendation that the legislature pass a constitutional amendment providing for minority representation in municipal bodies. This recommendation was wholly disregarded by the legislature. The charter was promptly passed, and through its instrumentality the hold of the powers that work for evil upon the city treasury and upon the appropriating of other people's moneys, was strengthened instead of loosened. The term of office of the Mayor was lengthened to four years, and his power greatly enlarged; the incumbents of office were made more dependent upon the Mayor; the length of the terms of office of heads of departments was increased; and no safeguard was placed anywhere in anticipation of the event that might happen, of a sinister and dangerous organization once again taking political possession of the city of New York.

The larger street-railway companies of the city seemed to have greater immunity from the control of the departments than ever before, and obtained the right to change motive power without anything like a proper return in money for the additional franchises they exercised. They subjected the city's inhabitants to great distress in consequence of the extensive physical changes they made in such motive power, involving the tearing up of the leading thoroughfares simultaneously; and they produced a greater disturbance of comfort than had ever before been suffered in the history of the city. Whilst this work was being prosecuted by the railway companies, the Commissioner of Public Works also saw fit to tear up the great avenues of the city which had not been torn up by the railway companies, so as to conclude within his own probable term of office a public work which should take years for its completion. These two instrumentalities, operating at the same time, spread discomfort and occasioned zymotic disease through the length and breadth of the city, and alienated another host of voters from the support of anything in the shape of a Reform movement.

The liquor law, passed during Tammany's control of the city, was enacted with the view of not being strictly enforced in a cosmopolitan city like New York, and probably also with the view of a corrupt acquiescence in its breach. During Mayor Strong's administration, and in the hottest of the summer months, Mr. Roosevelt, the President of the Police Board, ordered this law to be strictly and rigidly enforced, and in this course received the full support of the Chief Executive of the city. This action alienated from the Reform movement, and from further adherence to its banner, thousands upon thousands of followers

who regarded such strict enforcement as an impairment of their personal liberty and a senseless and needless aggravation of their discomforts during a protracted period of extreme heat in 1895.

Finally, the Republican party, within those three years, placed upon the statute book a most rigorous and unreasonable excise law, the enforcement of which went far beyond Mr. Roosevelt's performances during the summer of 1895, and thereby interfered with the personal liberty of a large proportion of the electors of the city, and with the habits of the Germans to a greater extent than had theretofore been attempted. The latter met the taunt, that they should not allow Sunday beer to be of more importance to them than good government, by the answer that they should not be asked to sacrifice the exercise of their innocent indulgences to puritanical legislation; that the question of their personal liberty was quite as important, as a matter of principle, as good government in the city. Whether they were right or wrong in their reasoning is beside the question. As regards municipal matters it produced in a large class of the voting population a feeling of positive hatred against everything that was labelled "Republican" and told with great force against Mr. Low, the candidate of the Citizens' Union, who was known to be a Republican.

Therefore, when the question was agitated in the summer of 1897 of nominating a Citizens' Union candidate for the mayoralty of New York, account had to be taken of a widespread feeling of resentment and disappointment against the existing régime, which permeated many classes of electors; and it required the utmost delicacy and generalship to overcome the vast masses of opposition which had been accumulating by these successive events and mistakes, and to weld them again into a united host against Tammany. Under the present system of representative government, which recognizes majorities or pluralities only, and without the acceptance of the principle of Minority Representation, a community has no means of formulating and making its protest against misrule effective, except to vote for those in opposition. Such a vote, therefore, can in no way be held to imply sympathy with or confidence in the organization helped by such a protest. Of the 233,997 voters for Tammany's candidate, not one-half, it may be safely said, were in sympathy with Tammany. A very large proportion of this vote—how large it is impossible to say—represented the voters' disappointment at the measures which, and resentment at the men who during the last three years had oppressed and disappointed them. Unfortunately, Mr. Low's candidacy was publicly sup-

ported by many of the men in close affiliation with Mayor Strong's administration, and by the Mayor himself, and also by a number of gentlemen who had very vague, but very large, sympathies with the defective and dependent portion of the community, and were willing, if chance were afforded them, to play the part of beneficent providence to the needy through the pockets of the taxpayers. Thrift and enterprise are as much checked and possibly destroyed by well-meaning communistic distribution out of public funds, which have to be raised and replenished by the taxpayer, as by knavery. Therefore, movements to take from the provident and thrifty the means whereby they live, and to compel their expenditure upon persons whose needs they wish to see provided for by voluntary contributions, and not through force, are looked upon with great fear by the provident of an electorate, who are the good middle-class of the community. An increase in the tax-rate means positive hardship to them and to their families and those near and dear to them, for whom they have striven earnestly to lay by the means to prevent the possibility of their being compelled to become the recipients of private and public charity. Many voters hesitated to put their property into the hands of persons, who, even from good motives, threatened, in bad times, to continue an era of vicarious philanthropy at the expense of the taxpayer. The philanthropist has his proper function in making men more conscious of their duties to each other, and inducing them *voluntarily* to contribute from their abundance to supply the needs of those less fortunate or less intelligent; but he ought not to be placed in charge of the public purse. It was feared, perhaps groundlessly, that in the event of Mr. Low's election, some provision by way of appointment to office would be made for certain men who had very pronounced tendencies to use the public moneys in charitable directions.

The result, therefore, in 1897—the reconquest of New York by Tammany—is no indication of the breakdown of American institutions or of free government. It was the better element of New York that antagonized the voters who would normally have been in favor of good government. Their mistakes resulted in the weakening of the garrison and the opening of the gates for the entrance of the enemy whom they had ejected three years before.

New York has not, as the London "Economist" charges, deliberately chosen a corrupt government; and the inference, that New York must itself be corrupt, is unwarranted. New York was resentful at the miscarriage of its efforts three years before. No people living

under Democratic institutions as now organized, and without true minority representation in full operation, has an opportunity afforded it to exhibit such resentment except by inflicting upon itself another wound; and that was the unfortunate situation in the city of New York in the autumn of 1897. It may be true that the wound need not have been inflicted had the Republican organization been under more patriotic and wiser leadership. But had it been under more patriotic and wiser leadership, there would have been no oppressive Excise Bill and there would have been no Greater New York measure. The death of Henry George during the campaign may also have had some effect; but his following was grossly exaggerated, and, whatever it may have been, was probably insufficient to have changed the result.

The greatest misfortune of the situation lies in the fact that Tammany is secure in its position for four years and has complete control of every department of the city government. If the election had been for incumbents of but a year or two, Tammany might very readily have been made to feel within a reasonable period of time that the victory it gained was not because a large plurality of the citizens of New York like to live under Tammany rule. But of this privilege of promptly ejecting the incoming administration, the citizens of New York are deprived, not by Tammany, but by those who figured before the community as the most active political adversaries of that institution and who have fastened upon it the existing charter for the government of Greater New York.

Had an intelligent appreciation of the effect of minority representation existed in the minds of the promoters of the new charter, and of the legislature which passed it, and provisions securing its benefits been incorporated therein, let us see how much could have been done to weaken and practically nullify the recapture of the city by Tammany Hall,—a contingency which never seems to have presented itself to these charter-makers. We will assume that 500,000 votes were cast for councilmen and aldermen in Greater New York. This assumption is made because it is easier to prove the situation by round figures than by odd numbers. Let us assume the proportions as they substantially stood, and that 220,000 votes of these 500,000 were cast for the Tammany candidates, 140,000 for the candidates of the Citizens' Union, 110,000 for the candidates of the Republicans, and 30,000 for the candidates of all other organizations. Sixty aldermen and 28 councilmen were to be elected. The vote cast would have given, in round figures, an electoral quota for aldermen of 8,000 votes, and for councilmen 18,000 votes. This would have given the Tammany organization under minority

representation 26 aldermen of the 60, and 12 councilmen of the 28, a minority of the whole number in each body, instead of the 48 in the Board of Aldermen out of 60 and the 26 in the Council out of 28 which they obtained under the existing system of representation and by which they have absolute control of both chambers. The Citizens' Union would, under a proper application of the principle of minority representation, have obtained at the last election 16 of the aldermen and 8 of the councilmen. The Republicans would have obtained 14 of the aldermen and 6 of the councilmen, while if the votes of all the other organizations had been concentrated, 4 aldermen and 2 councilmen would have been elected by them. In both municipal chambers a clear majority against Tammany would thus have been elected instead of an overwhelming majority in its favor. This Anti-Tammany majority would have been able to hold the Tiger in leash during the ensuing four years of the administration of the city government.

The writer of this article hesitated for some time as to the wisdom of setting before the community the facts herein stated, he having participated in every Reform movement undertaken in the city of New York from Tweed's day down to and including the advocacy of the election of Seth Low as Mayor, and sharing with his fellow-members of the Committee of Seventy of 1894, the responsibility for the election of Mayor Strong. He felt however that inasmuch as the battle of municipal reform must be fought again and again until success is achieved, such success, when achieved, could be made permanent only by a clearer understanding of, and no illusions about, the causes of the failure of the friends of good government in the campaign of 1897. Any contribution to public discussion having that end in view must ultimately have beneficial results.

SIMON STERNE.

THE POLITICAL OUTLOOK.

I.

THE aspects which frown upon the practical politician at this moment are full of perplexity and contradiction. The practical politician is nothing if not a thick-and-thin partisan. His main reliance is the party discipline. His stock in trade are the offices. Regularity his shibboleth, the party label at once the source and the resource of his authority and power, he is equally without imagination and convictions. If the way be not straight before him, he finds himself in the dilemma of the poor boy of the fable, who, having neglected to learn his letters, could not read the sign-board when he came to the crossing of the roads.

In the political campaign just ended, whilst the genii who are supposed to obey the summons of the practical politicians did their duty by Mr. Croker in New York, they failed to respond with their accustomed promptitude and assiduity to Mr. Gorman, in Maryland, and denied the call of Mr. Platt altogether. Even Mr. Hanna, with the Administration at his back, could have wished for better service in Ohio. In Kentucky,—one hundred thousand voters remaining away from the polls,—the Silver Democrats had it all their own way.

Truly, the independent vote, representing a constant but uncertain state of rebellion in the public mind, becomes an ever-increasing and all-unknown quantity. Whether the obstruction it raises to the perspective of the drill-masters, and the derangement thus brought into the process of estimating party forces and forecasting elections, be merely an incident of the time, or a new and fixed element in American politics, may not be stated with assurance. Nor can it be intelligently considered unless we go back a little and bring up some arrearages of political experience; for this is the pivotal point of contemporary speculation, the riddle to be unravelled by the practical politicians, the problem to be solved by thoughtful people. What does it mean? Where is it going? If one could find a definite answer to these questions, he would be well upon his journey along that highway which,

just ahead of us, abruptly turns the corner of the century and shuts out the vista of the region beyond.

It is the purpose of this article to look somewhat into facts and causes, as well as conditions and tendencies, and, if possible, to strike a balance between the practical and the theoretical as far as they relate to parties and elections and affect the present and future of our public life.

II.

Parties have been in all times but lamps to light the way. Filled with pure oil, and properly trimmed and tended, they emit a steady glow; but neglected, or left in careless hands, they lose their virtue and become unsightly and worthless. The average practical politician, however, takes little account of such things. The only lamp that concerns him beams upon election returns; and if this reveals majorities, it matters little to him whether it be bright and clean or old and dirty. We are told that the lamp discovered by Aladdin in the garden was of this latter description; and perhaps, after all, the practical politicians make no mistake in their indifference to the quality of the oil, or to the appearance of the vessel.

There are men still living who can recall the break-up of the old Whig party. It was the conservative force of its day. The movement of that time grew too fast for it. It could not keep up with the drums and tramplings of the slavery agitation; and, as the Democratic party stood for slavery and was unable to adapt itself to the other extreme, it sputtered out like a lamp whose uses are ended. Then followed an interval of darkness; and, having groped about in this darkness during the better part of four years, the elements which had composed the Whig party, with many Democratic recruits, joined the little band of original Free-soilers, and organized the Republican party, which, making a strong showing in 1856, elected its National ticket in 1860.

Thenceforward, the party lamps were well trimmed and tended, the filling used being of a very inflammable quality indeed. They blazed finally into a conflagration. But, with the collapse of the Confederacy, the extinction of slavery, and the restoration of the Union, the sectional and sentimental questions which had made the war, or which grew out of it, were adjusted, and the two great parties to these contests stood face to face with an entirely new set of political exigencies. There came to each the need of a fresh set of issues. The Republican party seized upon the theory of Protection as its mainstay. The Democrats allied themselves to the doctrine of "a tariff for revenue only."

But neither party was wholly sincere or at one with itself. There were Protectionist Democrats. There were Free-Trade Republicans. The old party machinery, though in each instance considerably worn, remained intact; and the party managers sought to make it suffice. Thus it is that we have but two competing organized parties, one calling itself the Republican party and the other calling itself the Democratic party, neither able to tell just why it exists and what it exists for, and both combined unable to supply issues distinct enough,—though sufficiently redundant in object-lessons of another sort,—to set up an old-fashioned political kindergarten. The independent voters are in this way constantly reënforced from each of the two camps; albeit there is to be reckoned with, besides these, a great body of indifferent voters, who, seeing nothing definite anywhere, grow more and more irresolute, knowing not how to vote, and who, in consequence,—and often in great numbers,—do not vote at all.

All this is a result of the absence of decisive issues, which the party managers abhor, and of the lack of courage in the party leaders and good faith in the declarations of the party platforms.

It was left for the campaign of 1896 to develop out of the antecedent chaos of opinions among the people and of cross-purposes among the politicians, a very dangerous array of party forces; and, had not the reserve of intelligence and virtue among the voters come to the rescue, the country would have been precipitated into a convulsion, partly economic and partly social, for which it was wholly unprepared. Optimistic patriotism thinks that this reserve of intelligence and virtue among the voters will always come to the rescue. But there are those, who may not be lightly dismissed as pessimists, or as prophesiers of evil, who are not so sure about this.

In 1896, the Republicans, representing the issues of sound money and orderly government,—issues uppermost in the people's mind and heart,—swept all the centres of population and carried the country. One year later, the Democrats swept these same seeming strongholds of conservative politics. Why? Because, in the meantime, the Republicans, forgetting the lesson of their dear-bought victory, had no sooner arrived safe in power than they proceeded on the regulation plan: They enacted a tariff law in favor of the protected interests, and on the plea of a deficit, higher than ever, yet failing to make good the deficit; they parcelled out the offices among themselves and their retainers; and, enjoying their good fortune to the top of their bent, they left the Money Question to take care of itself, looking to it that, in doing so, it should

occasion as little disturbance as possible. In point of fact, the Money Question remains precisely where they found it; though it is perhaps something to say that the policy of the Treasury in this particular has not varied from that of the preceding Administration, which, whilst it may not have been very brilliant, yet maintained the national honor and credit, and kept at bay the wolves of agrarian passion and plunder.

If, after the election of 1896, the Republicans had desired to make common cause with the Sound-Money Democrats, and to share with them something more substantial and enduring than the glory of the victory,—if their leaders had been large enough and broad enough to see the need of consolidating and keeping the immense McKinley vote together, with the purpose of permanently meeting and resisting the onset of the forces of populism of every kind and in every form,—they would have proceeded upon very different lines. In England, which furnishes the one modern instance of successful coalition, the Liberal Unionists, under Hartington and Chamberlain, joining with the Conservatives, under Salisbury, to defeat what they believed to be the dismemberment of the British Empire threatened by Gladstone's policy of Home Rule, all lesser questions were sunk in the one great issue; for the sake of that issue, the Conservatives became Liberals; Hartington, Chamberlain, and the rest abandoned Gladstone to his fate; Home Rule was beaten; the empire was saved; the Conservatives got an infusion of new blood and brains; and, after nearly a dozen years, the coalition is still in power and as strong, apparently, as ever it was. If there had been any statesmen in the Republican party, or, if the Republican party had been anything except a clever and fortunate opportunist, held together mainly by the Protectionist interest, on the one hand, and the cohesive power of the patronage, on the other, this lesson out of recent English politics would have been heeded and applied.

As a matter of fact, the Republicans have gone on precisely as if there were no object-lesson behind them and no danger in front of them. Their leaders have shown themselves quite as fatuous and blind as the Bryan leaders. They began in the Dingley tariff to build an impassable wall between themselves and their Sound-Money allies; and, having brought the Tariff issue to the front and sent the Money issue to the rear, they are even now tampering with the latter in ways that bid fair to produce still greater division and confusion, with the certainty that nothing will be definitely settled by the present Congress. Thus far, there is no fixed financial policy visible, and no likelihood of relief from agitation. There is nothing visible, except a vulgar and sordid strug-

gle between two sets of rival politicians, one calling themselves Republicans, and the other calling themselves Democrats. The public interest seems somehow to be lost in the shuffle. Is it unnatural, therefore, that individuals, finding themselves at sea, should catch now at one plank and now at another, and that the practical politicians, sure of nothing from election to election, should act on the principle, "Let us eat and drink, for to-morrow we shall die"?

III.

The Democratic party, being in power, had first to meet the Money Question. It proved a reef on which the party struck. The Republicans are now in power, and, the reef being exactly where it was, can they escape its perils? In the Speaker of the House they have a most skilful and resolute pilot. In the President they have a most experienced and accomplished party leader. But there is the reef, with two sessions of Congress—a long session and a short session—and, along with these, the certainty of a great deal of weather, right before them.

They have cut themselves off from much outside sympathy and support. They will have to depend chiefly upon themselves. Every American being a born financier, it is hardly likely that the Republicans, as an organized party, can agree upon any measure of fiscal policy to be put through Congress at the end of the party lash. Yet the game they started out to play is purely a party game; and what they cannot accomplish within the party may not be accomplished at all. The course of events, as well as the course of the Republican leaders, has put it out of the power of the Sound-Money Democrats to render effective assistance or to make a substantial showing. They have been, for the time being at least, crushed between the upper and the nether millstones.

Two purposes inspired the Sound-Money Democrats when they formally separated themselves from the main body of their political associates and set up an organization of their own. The first of these was the rescue of the country from what they regarded as an imminent, deadly danger threatened by the Chicago ticket and platform. The second was the creation of a nucleus around which the old Democracy might be rallied when the fusion made at Chicago should go to pieces, as they believed it would. The results have contradicted both these sincere but erroneous assumptions.

If the Indianapolis ticket had secured the vote it was expected to get, Bryan, and not McKinley, would now be in the White House. McKinley required all the Democratic votes he received. It may be

that the Palmer-Buckner ticket constructed a bridge over which these Democrats could pass. But it is quite certain that, if the Democrats who voted for McKinley had voted for Palmer and Buckner, Bryan would have been elected.

Subsequent events have, in many ways, borne out the same idea. It has been conclusively shown that, as a separate organization, the Sound-Money Democrats, as officered and marshalled by the Indianapolis convention, have not strength enough to count as a balance of power, and, as such, to shape results. The Republicans do not recognize them. Between them and the regular Democrats there is bound to be, as long as their organization continues in the field, implacable hostility. Meanwhile the Sound-Money leaders get nothing for their pains except objurgation and contempt; for, when it comes to voting, their followers either do not vote at all, or else vote the Republican ticket.

On these points, the recent test in Kentucky was all-sufficient.

The failure of the one horn of the original dilemma to justify itself carries with it the failure of the other. If the Sound-Money Democrats hold the balance of power nowhere, they can nowhere form a nucleus for the rehabilitation of the old Democracy. In a word, as an organized movement, the Indianapolis programme—patriotic in its conception and ideal in its expression—has vindicated neither of the purposes which called it into being. Its authors have merely raked the chestnuts out of the fire for the Republicans, and got their fingers burned. Politically, they stand as neither fish, flesh, fowl, nor good red herring; and, if they should continue their organization, they would not effectively contribute to the cause of Sound Money. In that particular form, and under the same leading, they are not likely to continue it. But this does not mean that their cause is lost, that their sacrifices were made in vain, and that the two dizzy extremes of radical Republicanism and Radical Democracy only remain possessors of the field and masters of the future. No National Democrat need despair of attaining the ends of good government, both as to sound money and as to the public credit and order which were sought by the movers and authors of the Indianapolis convention. They will seek, however, new methods of procedure, and means of protest other than those formulated at Indianapolis, and submitted to a following whose instincts proved so much more acute and effective than the judgment of its leaders.

IV.

Ours is supposed to be, and in one sense, at least, is, a government of the people; and, as each nation is said to possess exactly the govern-

ment it deserves, the people of the United States cannot complain if theirs, being the freest in the world, is at the same time the most prodigal and unequal. The territory over which it extends its dominion is so vast, with interests so varied, that nothing short of a division of parties, always absolute, and sometimes tyrannous, can reduce its political decisions, such as they are, to proportions and system. There are two leading parties—the Republican party, and the Democratic party. But the Democrat in Massachusetts and Maine and the Democrat in California and Texas, the Republican in Rhode Island and Vermont and the Republican in Oregon and Colorado can reach but an approximate understanding, and must take many things for granted and on trust.

Those who have served upon platform committees in national conventions will recall that divergencies invariably arose whenever questions of a geographical character or tendency were introduced. The virtue and intelligence which are supposed to be inherent in Republican institutions and to emblazon the popular character have usually discovered an eye for the main chance; and Gen. Hancock builded more wisely than he knew when he described the tariff as "a local question." That the wisdom of many exceeds the wisdom of one, may still be accepted as a truism. But, when we seek to ascertain, by a careful study of the late election returns, just what the sum total of the aggregated wisdom actually is, and what it specifically wants, the party leaders, hardly less than the practical politicians, are met by many puzzling contradictions.

There appear to have been "local issues" everywhere. Mr. Gorman was a "local issue" in Maryland. Mr. Hanna was a "local issue" in Ohio. Of course "local issues" dwarfed all other issues in Greater New York. The Free-Silver leaders and organs in Kentucky naturally insist that the result this year is a reversal of the result of last year, and claim Democratic majorities, wherever they appear, as sure evidence that Free Silver has yet to come to its own.

During the last twelve years, the popular verdicts have certainly been most capricious: Cleveland, in 1884 on a Tariff straddle; Harrison in 1888 on straight Protection; the McKinley Bill and Cleveland again in 1892 on a Radical "revenue only" platform; McKinley in 1896, the money issue absorbing all other issues; and now, the Dingley Bill succeeding, a Democratic revival in 1897. Who shall predict just what will happen in 1898 and 1900?

Intense and eager partisans, as well as the practical politicians, who

doubt nothing until they have stumbled over something, are already counting their chickens out of last year's basket of eggs; but, taking their cue from the lessons of the twelve years intervening between 1885 and 1897, men less optimistic will think twice before they venture upon any certain calculation, or estimate too confidently any political promise or asset.

There seem to be some reasons for believing that the quadrilateral contest for Mayor of Greater New York may prove but a forecast of the political chessboard in 1900, and that in the centenary year we may have a quadrilateral contest for the Presidency with candidates corresponding to Low and Tracy, George and Van Wyck.

Admonished by the success of the Democratic candidates in the recent election, where the Chicago platform of 1896 was ignored, there will appear upon the scene a multitude of Democratic counsellors urging the same policy of evasion for 1900. These will have reason and the facts of the case upon their side. But the Bryan faction, which makes up in ardor what it lacks in fact or reason, is committed to the repetition in 1900 of the campaign of 1896. Free silver is its trade-mark. Eliminate that and you eliminate it. If, therefore, Mr. Bryan and his friends are beaten in the national convention by the more conservative of their associates, led by Tammany, we may be sure that, following the example of the late Henry George and his companions, they will bolt the convention and set up for themselves. But, if they have their way, and nominate Mr. Bryan on the Chicago platform of 1896, can the conservatives of the party afford a second time to submit in silence and to witness another overwhelming defeat, both State and national, in States which, on tenable, even tentative, issues, are surely Democratic? Can Tammany afford it? Can men like Hill and Whitney and Gorman afford it? If they think they cannot, they will not sulk in their tents, but will seek to save themselves, and to rescue from the impending shipwreck their local organization and personal effects. Thus we may have a placement in the nation such as we lately had in Greater New York; Bryan standing where Henry George stood, and some other Democrat typifying Van Wyck.

The prospect of Republican unification, though not threatened by such imminent and obvious perils, is really little better. At the time of writing, the battle of the resentments over the distribution of patronage has already shown signs of beginning. The uncertainties of a dangerous fiscal debate in Congress yawns before the party leaders. Personal rivalries, big and little, have their teeth set. If the Republi-

can party escape the menace of such a situation and the consequence of its acts, it will reverse the experience of parties, which are but mortal.

Political forces on all sides are in a fluid state. This much at least the practical politicians understand; and the more enterprising among them are willing to take chances,—as indeed Mr. Low and Gen. Tracy did, and Mr. George and Judge Van Wyck. Ambitious men, to say nothing about professional party managers, are likely to find much to tempt them in such a lottery. The circumstance, that, under the conditions named, the election may be thrown into the House, will increase the temptation to the more adventurous of the practical politicians, and perhaps to the more unprincipled among the aspirants, and will multiply the number of speculators upon a stock-jobbing partisan exchange, to whom the risks seem so small and the possibilities so large. In Greater New York, it was what is called "anybody's race," till close upon the day of election. Is it a too visionary stretch of fancy to conceive, even thus far in advance, a similar political situation in 1900?

V.

In the foregoing observations, account has been taken only of the outer aspects, the concrete side, so to say, of the course of events and parties; but when we come to consider the inner life of the nation, the moral nature and the thought of the people, conjecture is more or less defied and baffled.

It is easy to see how the appliances of modern invention, annihilating time and space, and centralizing the possibilities, if not the powers, of government beyond the dreams of Hamilton, expose us to dangers, the very naming of which subjects one to the charge of sensationalism. With a President in office committed to the declarations of the Chicago platform of 1896, and inspired by the spirit of the campaign which followed the political conventions of that year, a recurrence of the Debs riots of 1894 might involve untoward disaster,—riot deepening into insurrection; the mob spirit organized and directed by the secret societies sweeping all before it; the flame of mob violence leaping from city to city throughout the centres of population; the civil forces powerless to impede; resulting, after a reign of anarchy and incalculable ruin, in the old, familiar story of military suppression and absolutism. On the other side of the argument, stands a century of popular achievement. The Federal Union has resisted every attack. The National Constitution has withstood every strain. Republican institutions have survived

all the shocks which have variously assailed and shattered feudal institutions. The war for independence and the foreign war; the struggle for constitutional existence; an irrepressible conflict sown in the blood and marrow of the social order; a conflict of sections; the ordeal of reconstruction; the disputed succession,—each of these foes to liberty has successively menaced the American Union; and yet, at this moment, it is stronger than ever it was. Is it merely the voice of national vanity that tells us we shall come out of the strife between capital and labor as we have come out of every other peril, still a Democratic republic, its faith renewed, its credit untarnished, and its flag flying over a race of free men, admirably adjusted to the conditions of the modern world, and thoroughly contented and homogeneous?

That we have travelled far away from the simple preachments of the Fathers of the Republic and from the primitive doctrines of the Constitution, few thoughtful persons will deny. That politics has become a profession, and that the politicians are organized into a class, the essential principle of whose being is office, disinterested and observant men need not be told. The difficulties of organizing public opinion into a counterbalancing force may be admitted. Yet, back of all, stand the facts of a hundred years of triumphant history, bidding us to be of good cheer. The following axiomatic propositions to a just and wise system of free institutions are as true now as ever they were; and, in the end, they must form the basis of that party organism which is to restore the Government to its better self, and to redeem the people from the excesses of mercenary politics, bringing about the indispensable readjustment of society to modern conditions and the inevitable reconciliation of capital and labor:—

First—The Government has no right, either equitable or legal, to tax the people, except to raise money for its own support; every dollar of taxation diverted from this purpose is robbery; and it is equally important that the money legally collected shall be honestly applied.

Second—The right of the people to local self-government is an inalienable right, as it is to local option in the counties, to home rule in the cities, to all rights in the State not expressly delegated to the General Government; and the preservation of this right of local self-government is essential to that just equilibrium between liberty and law,—the corner-stones of our system of Federal and State institutions.

Third—The money of the country must be good money; circulating everywhere; unquestioned and unquestionable; recognized at once and taken at its full value; and, to attain this universal recognition

and acceptance, it must consist of gold and silver and paper, the whole of interchangeable value, each convertible into the other on demand, and freely circulating side by side.

Fourth—The laws must be executed rigidly and impartially; legislation must be restricted to its proper functions; the principle of individual responsibility must be taught and enforced; the public credit and honor must become subjects of personal concern; and parties must be held to a real and strict accountability through their official representatives.

"Generalization," the critic of language will say: but possible of attainment; though not until they be deeply planted in the popular mind and heart can we hope to reduce them to actuality and detail.

HENRY WATTERSON.

THE INCORPORATION OF THE WORKING-CLASS.

How can a permanent improvement in the condition of the working-class be realized? This is the all-important question that has at length forced itself for consideration not only on the more intelligent members of the class directly interested, but also on the much preoccupied minds of the possessing and governing classes. Within the memory of many who might object to being called "old," this question was ridiculed by polite society, and its public utterance was stifled by the clatter of cavalry and the rumble of cannon. Within the last few years, however, a real revolution in public opinion on the subject has been effected, the first results of which are now becoming visible.

If it were asked what is the cause of this change of opinion, the only really satisfactory answer would be that it is due to the long-obscured, but no less sure, growth of the conception of Humanity. A Czar Alexander decreeing land and liberty to forty-three million serfs, a President Lincoln signing the emancipation of four million slaves, and a Cardinal Manning riding at the head of one hundred thousand striking dock-laborers are so many evidences of the actual strength of a conception ever extending, and taking deeper root day by day. Many venerable prelates may see in the growth of this conception the eternal purpose of the Divine Spirit ever becoming more manifest to man. Learned jurists may call it the development of law; politicians may see in it the recognition of the natural rights of man; militant socialists may regard it as a concession made to avert their predicted social cataclysm; yet none of these explanations is contradictory to the fact of a growing race-consciousness,—a consciousness ever more rapidly tending to a radical improvement in the condition of the workers.

At this late date, it is very evident that no such improvement can be achieved by denominational, legislative, or private charity, however generous. Therefore, we have no hesitation in declaring that the desired result can be realized only by a more perfect social unity, involving the full incorporation of the working-class into the ranks of modern society. As a preliminary to the explanation of the method of such incorporation, it is necessary to realize the magnitude and difficulty of the task.

Of the great majority of those whose special calling it is to form the public mind, few there are who speak or write of the working-class with any clear idea either of its origin, of its development, or of its real aspirations. The great majority of the publicists have seized upon certain sensational phrases, coined by ideological professors and put in circulation by pseudo-politicians, without ever inquiring whether the working-class really accepts the dogmas put forward in its name, or whether the workers make any serious attempt to carry out those ideas in practical life. On the other hand, there is a constantly increasing number of manual workers who, after long observation and patient effort, have arrived at certain positive conclusions concerning the nature and extent of the task to be achieved. To such investigators, it appears that the working-class constitutes a majority of the people of every civilized country, and that it is composed of families of free men who, not having inherited lands, tools, or funds, ordinarily feed, clothe, and shelter themselves with wages earned by the daily labor of their bodies. This class is generally considered to be free because it is not a closed class from which it is impossible for anyone to escape, or to which entrance is denied; that is to say, it is not a caste. It is also held to be free because the members thereof are not slaves, to be bought, sold, and compelled to labor by the torture of the lash; neither are they serfs, without liberty to change their masters and places of residence. We must recognize, however, that this freedom is narrowly limited by an ineluctable fatality,—the fatality that labor is inseparable from the person of the laborer. Therefore, a labor contract involves the use of the laborer's body, and more or less domination over it. And we must further recognize that the systematic abuse of this domination is such that it has become more threatening to the existence of social order than were, in their day, the worst abuses perpetrated by ancient slaveholders or feudal barons.

There are those who never tire of asserting that the evident abuses connected with the wage system are irremediable, and that the wage system itself should therefore be abolished. But, as these theorists have never succeeded in establishing an objective demonstration of the practicability of any better system, we can afford to pass them over in silence. Again, there are others who assert that, instead of there being a working-class, there is an infinite number of working-classes, which, existing under widely different conditions, can never be united in a struggle against the abuses complained of. Without doubt, it is important to know what degree of truth there is in this view.

It cannot be denied that there are many grades in the working-class,

which, though they blend imperceptibly into each other, exhibit very essential differences as we approach each extremity of the industrial scale. Nor can it be denied that there are differences both in the nature and the intensity of the suffering endured by each of these grades. There is one large division of workers,—that of the general laborers,—which suffers chiefly from physical privation; and there is another and smaller division,—that of specially skilled laborers,—whose suffering is none the less severe because it is more mental; consisting, as it does mainly, of fear and dread. Let us illustrate the difference in the nature of that suffering, and then expose wherein lies the real unity of working-class conditions.

The skilled mechanic, with his family, may, ordinarily, have sufficient food and decent clothing; he may have a carpet on the floor of one of his rooms; and the whir of a sewing-machine may be heard in his home. But all this does not mean that his lot is a happy one. If he have a tolerably comfortable home, that comfort is not, in most instances, the result of his own wages alone, but of the added wages of one or more of his children who, in a large proportion of cases, have been taken prematurely from school. It should be borne in mind that each worker has, on an average, at least one child, who, receiving but one-fourth of an adult's wages, competes disastrously with the father, the natural bread-winner of the family. Necessarily, as a result of such ruinous competition, the mechanic's wages are insufficient to enable him properly to fulfil his duty as a husband and a father; and his hours of labor are too long to permit him to cultivate his mind and to deal intelligently with the grave social and moral problems ever becoming more threatening.

Added to the stings of conscience, incurred by aiding the fatal system of child-labor, he also suffers from the sense of increasing insecurity. On Sunday and on working-day, in the brightness of mid-day and in the darkness of the night, he is ever haunted by the fear of two inexorable fates appearing in the guise of the employer and the landlord,—the uncertainty of work and the certainty of rent. To escape this latter fatality, he may listen to the seductive cry, "Own your house and cease paying rent," only to find, after bitter experience, that he has but changed the burden of rent for that of interest, that he must encroach upon the normal subsistence of his family, that he has chained himself like a serf to the soil, and that the employer takes advantage of his immobility to use him as a tool to effect a general reduction of wages.

Concerning the condition of the general laborer, two important facts are to be noted: First, that his wages are from one-third to one-half less

than those of the mechanic; and, second, that his family is usually one-sixth greater. To remedy the great deficiency of wages, he utilizes, from an early age, the labor of his children; and in this deplorable manner he succeeds in supplementing his income by one-third. Even with this addition to his maximum wage, he would be unable to meet the increased cost of subsistence arising from his larger family, if he did not curtail his expenses in other directions. Therefore, the furniture of his home is of the scantiest, and its quality of the poorest. His books are still more scanty than his furniture. Insurance for times of sickness is curtailed, or altogether neglected. Outside the garments absolutely necessary for working-purposes—the harness of himself and working-children—his expenditures for clothing are almost *nil*. And, finally, he attempts to solve the problem of making both ends meet by stuffing his larger family into a smaller and cheaper tenement. There is no denying that the lot of the general laborer, even with steady employment, is a hard one. But, when he is reduced, like many dock- or wharf-laborers, to casual jobs, he becomes still more dependent on the labor of his children, and even on that of his wife. In such case, it may well be that he often feels the pangs of hunger; and it is tolerably certain that sickness and disease are seldom absent from his cheerless and squalid home. Yet, in this last extremity of working-class existence, he struggles to keep together his few sticks of furniture as a barricade behind which he and his may battle against the fearful doom that awaits the vanquished workers—the doom of beggary or crime for labor's vanquished sons and daughters.

If the substantial correctness of this view of the sufferings of the skilled and the so-called "unskilled" laborers be admitted, it remains to point out the essential unity of their conditions. The main fact that distinguishes the workers, as a class, is that they do not and cannot make any appreciable permanent savings. As a rule, the wages of one week are all they have for the next. They are compelled to live from hand to mouth; and if, by the economy—and often the self-sacrifice—of the mother, some small surplus remains, that surplus is soon ingulfed in one of the many frequently recurring family requirements, in the necessities of the next "dead" season, or of one of those prolonged depressions that invariably follow each period of excessive industrial expansion. The absence of inherited property, and the impossibility, practically speaking, of acquiring property by the labor of the body, is that which constitutes the proletarian character,—the universal characteristic of the working-class.

The principal reason why so much industrial anarchy and misery exist to-day is because this proletarian characteristic has not been more generally recognized by the workers themselves as a natural and normal condition,—a condition to be vastly improved by united action, but not one to be absconded from. Shallow orators have insisted that the working-class has been degraded, since some supposed Golden Age, by the violence and cupidity of aristocrats; and equally shallow writers have concocted wonderful stories of "self-made men"; intimating thereby that all might become capitalists by simply willing it. Owing to the strong common sense of the workers, such stories have not generally produced their logical effect; yet, too many, who otherwise might have remained honorable workers, have ultimately become the most extortionate "sweaters" and the foulest industrial vampires.

It is notorious that the worst abuses of our industrial system are those emanating from employers with insufficient capital, and that the smaller the employer, the harder the taskmaster and the worse the paymaster. All this is not to say that the humblest workman, who, by gift or bequest, finds himself in possession of sufficient wealth, should not become an employer. But it must be distinctly understood that, to improve the condition of the worker as a worker, and not as something else, is the worker's best and most permanent interest; and that while striving to secure for himself and others the best possible livelihood, all attempts to accumulate, with the view of becoming an individual or a coöperative employer, should be regarded as anarchical and highly detrimental to working-class welfare.

What then is to be done to realize that condition in which the working-class will be content with its lot? The answer seems difficult; but, in reality, it has been given by the working-class itself. As my desire is to carry conviction, I may be excused if, instead of stating that answer dogmatically, I approach the subject from the side of history.

Each social class, in its rise and progress, necessarily assumes a special form of organization, enabling it to maintain internal order, and to perform efficiently its proper function. When history opens, we see the theocratic and military forms of organization already fully established. At a later period, although still in the dim twilight of historic time, we perceive the beginning of the organization of a free industrial class as, one by one, slaves are emancipated and assume the responsibility of supporting themselves by their own undirected toil.

It is not easy for us to realize the great difficulties which that new

class had to overcome. In ancient society, when each family owned or hired sufficient slaves to spin, weave, and sew, to build, forge, and otherwise fashion all the ordinary articles required by the household, there was but little need of the products of free labor. But even in that remote age, the tendency to specialization in production gradually asserted itself, and made the existence of more and more freedmen possible. At first, that existence must have been a most precarious one. Ever in danger of being kidnapped or "shanghaied"; scorned alike by freeman and slave, as one declassed and without gods, hearth, or home; defenceless against outrage, through having lost a master without acquiring political franchise; in danger of starvation and disease, in an age destitute of almshouses or hospitals;—it was under such conditions, that the freed workers combined in trade-unions, and formed the germ of that free industrial organization which, in a later age, was to produce such immense results.

It will be well understood that it is not to the name "trade-union" that I wish to direct attention, but to the fact which that name designates. The trade-union is a general social fact,—not one confined to any age or country, but a fact springing into existence whenever and wherever a people has reached a certain stage of civilization. It is a universal fact; but the name varies. Thus, in antiquity, the trade-unions were termed "fellowships";—*ἑταιρεία*, in the Greek tongue, and *collegia* in the Latin;—in the Middle Ages, they were known as "corporations" and "fraternities"; while in modern France and Germany they bear the names of "syndicats" and "Gewerkvereins." Flavius Josephus, in the Eighth Book of his "Antiquities of the Jews," bears testimony to the existence of trade-unions among the Jewish and Phœnician workmen. Plutarch, in his life of Perseus and elsewhere, no less clearly indicates their existence among the Greeks. The same famous author, in his life of Numa, does not confine himself to saying that the constitution of the Roman trade-unions was amended by authority about the year 716 B.C., but, in addition, names some of the unions thus regulated. He says:—"This distribution was according to the several arts or trades of musicians, goldsmiths, masons, dyers, shoemakers, tanners, braziers, and potters, . . . who had their respective halls, courts, and religious ceremonies." From this latter sentence, it is evident that the union had been previously recognized as capable of inheriting property, administering justice, and making the sacred invocations, libations, etc., customarily exercised by a *pater familias*.

The organization of the Roman trade-unions was distinguished by the simplicity of its several parts, that is to say, of its local unions and groups; by its great extension throughout a territory of about four million square miles; by its centralization in the Eternal City; and by its marvellous efficiency. In a law of Constantine, A.D. 337, mention is made of thirty-five unions of as many different trades. These, and many others mentioned in the Theodosian code, in the works of several writers, and in inscriptions on thousands of memorial tablets still in existence, were composed of many local unions scattered throughout the provinces and divided into groups in the different cities. The maximum membership of each of these local unions was fixed, by a law of the year A.D. 417, at five hundred and sixty-three members. The members of each local union elected, every five years, a dean and two assessors, or assistants. They also elected annually, four syndics; thus forming an executive of seven officers. There was further elected, every five years, by the votes of the whole membership throughout the empire, a general treasurer, who bore the title of "prior," and was responsible for the revenue and property of his union as a whole.

In recognizing that Roman civilization was essentially military, we are too apt to underrate or entirely overlook the industrial element of that civilization, and the important part played by the trade-union in building up that mighty power. The senate, alike in royal, republican, and imperial times, was the directing power of the state; and to carry its will into execution it ever relied on two grand organizations—the legions and the trade-unions. It was the legions who carried Rome's conquering sword to the ocean and the Danube, to the foot of the Caucasus and to the Grampians; but it was the unions who made those conquests possible, and who largely contributed to the herculean task of blending so many different nations, languages, and religions in one coherent whole. It was the unions who made the clothing, armor, and weapons of the legions. It was the unions who collected the stores for every campaign, and fed the legions whenever they were called for the safety or aggrandizement of Rome. It was the unions who built all those magnificent roads, bridges, aqueducts, baths, sewers, arenas, and temples in Italy, Spain, France, England, Syria, and Africa, whose ruins, even to this day, are eloquent witnesses to the marvellous technical ability of their constructors and to the sagacity of the senate. It was the unions who produced the finer articles of utility and luxury demanded by the wealthy patricians. It was the unions who collected the government land taxes (which were payable in kind), transported them by land and

sea, manufactured them into consumable products, and distributed those products to all who had the wherewithal to buy.

From the earliest times, the Roman trade-unions pursued a career of unbroken prosperity; and they did not cease to extend their beneficent influence until Rome itself tottered to its fall. From the time when the first Christian emperor made Constantinople the seat of his empire, vast swarms of Gothic and German barbarians had been massing on the frontiers, waiting for the opportunity to attack and plunder the "mistress of the world." These hordes were at length put in motion by another and more barbarous horde, the Huns, pressing on their rear. The Goths poured over the Alps; and scarcely had they been driven back, when a fatal mass of mingled German tribes crossed the Rhine, never more to be repelled. Wave after wave of the rude invaders overran the land like a ceaseless flood. Province after province was torn away. The means of communication were obstructed or utterly destroyed. The finely articulated organization of the trade-union was hopelessly dislocated; and, at the commencement of the fifth century, that organization fell, piece by piece, with the empire.

Four hundred years passed away, while the invading masses surged to and fro, ravaging and marauding, until it seemed that the very memory of civilization had been blotted out forever. At length from out that heaving mass of barbarism arose the mighty figure of Charlemagne. While almost continually engaged in beating back fresh hordes of barbarians, he found time, amid a host of other useful tasks, to attempt the reorganization of the unions. The attempt, however, was premature; for it was not until the twelfth century that Western Europe had sufficiently recovered to recommence emancipations, to reëstablish municipal liberty, or to permit the restoration of the free organization of labor. There is sufficient evidence to warrant the assertion that many of the local unions of antiquity, though sadly shrunken, continued in operation during all this period. However that may be, in 1258, Etienne Boileau, Provost of Paris, was ordered by Louis IX to institute a thorough inquiry into the traditional customs and regulations then existing among the trade-unions of Paris. That inquiry occupied nine years; and its results are preserved in a book entitled, "Registres des mestiers et marchandises de la ville de Paris." This invaluable record contains the rules, then for the first time written down, of one hundred different trade-unions existing in that city, and furnishes the most precise information concerning the changes which had taken place in the union form of organization since Roman times.

The mediæval unions differed from the unions of antiquity in that they had two centres, the one, religious and benevolent; the other, secular and protective. That is to say, they had a church and a hall. The union assembled in the church as a "fraternity," for worship and the benevolent works required by their rules: in the hall, the union met as a "corporation," to discuss trade interests and conduct elections. The ancient unions defrayed their internal expenses from the rent of lands granted by the state: the mediæval unions were supported by monthly dues, initiation fees, fines, gifts, and bequests from members and others. The mediæval unions were recruited solely by apprenticeship; whereas, the ancient unions gained members from three sources, —the sons of members, candidates of the freedman class, and purchased slaves, who, after a probation of an indefinite period, were emancipated and admitted to membership.

The mediæval unions also differed in having three several degrees, —apprentices, journeymen, and masters. Apprenticeship consisted in a novitiate limited to a fixed term; journeymanship afforded the workman an opportunity to prepare for the mastership; and the mastership was acquired by submitting proofs of competency to the wardens of the union. The social difference between apprentice, journeyman, and master was marked by little more than the natural subordination resulting from age and experience. They were each subject to the same trade tests, and passed through the same degrees. They worked side by side, ate at the same table, and slept under the same roof as members of one family. That primitive equality, however, was not destined to last.

The necessity for the employment of larger capital, when the decline of military violence permitted the extension of commercial relations, gradually resulted in the restriction of the mastership to the wealthier members of the unions. Journeymanship became more and more a life-long state; and the altered conditions soon led to the exclusion of the journeyman first from the master's family circle, and later from the corporation of his trade. Finally, the legal suppression of the fraternities left him completely isolated. Commencing about the middle of the fourteenth century, in the trades requiring the greatest capital, this process of exclusion had, by the middle of the sixteenth century, become general in the most industrially advanced countries. A series of royal charters and legislative enactments, culminating in the Statute of Apprentices (1562) in England, and the Edict of Henri III (1576) in France, marks the course of this great social revolution. Banished from the intimacy of his master, excluded from his corpora-

tion and thereby deprived of a voice in union, municipal, and national affairs, robbed (by the suppression of the fraternities) of the means of support in sickness and old age, disfranchised and disinherited, the worker sought in secret association to oppose to the unity of capital the unity of numbers.

Evidence of the continuous existence, from the fifteenth century almost to the present day, of secret societies of journeymen, united in defence of their class interests, is by no means wanting. Indeed, the present French government has published a collection of the official decrees which, during a period of three successive centuries, their predecessors had ineffectually fulminated against *Le Compagnonnage*,—a vast federation of secret, oath-bound journeymen's trade-unions, extending throughout the whole of France. It has been well proved that this occult federation included, among others, the several unions of bakers, blacksmiths, carpenters, coopers, curriers, farriers, gilders, glassworkers, hatters, locksmiths, nailmakers, plasterers, roofers, ropemakers, shoemakers, stone-cutters, tanners, turners, weavers, and wheelwrights.[1]

In England, such secret associations took the guise and name of "friendly societies." One such society, The Friendly Society of Iron Founders, held its meetings, it is said, on moonless nights and on lonely moors, and, at the close of each meeting, buried its records in the ground, in order to escape detection and punishment. That society, today, is an open trade-union, with one hundred and thirty-eight local unions throughout the United Kingdom, twenty-one thousand members, and an annual income of $400,000.

Resolving to throw off the cloak of secrecy and to take their stand in the light of open day, the unions soon found that they had to encounter the most unrelenting persecution. On June 14, 1791, the revolutionary Assembly of France issued a decree denouncing them as "unconstitutional, dangerous to liberty, and in opposition to the rights of man." Nor was England more tolerant; for in 1800, by the Act, 40th George III., *cap.* 106, laborers were forbidden, under penalty of imprisonment with hard labor, to hold meetings for union purposes; the funds of denounced unions to be given to the informers. For five hundred years the unions resisted all attempts to stamp them out of existence, when, in the year 1824, the penal laws against them were removed from the British statute book. On August 13, 1875, every legal

[1] "Le Placement,"—an official publication of *L'Office de Travail* (Paris, 1893), and, without doubt, the most important contribution made by any labor bureau to the history of the labor movement.

discrimination against them was finally abolished in the United Kingdom; and in France similar action was taken in 1884. It is hardly necessary to add that a large majority of the States of our Union have yet to follow in the direction indicated.

The essential feature distinguishing the modern trade-union is that it is based on the recognition of that separation of the functions of the capitalist and of the workman which arose gradually during the Middle Ages. Frankly accepting that separation as a permanent one, the union seeks systematically to regulate the relations between the employer and the employed—between the two great classes of modern society. As means toward arriving at such regulation, the unions employ *conciliation*,—that is, mutual discussion by the contending parties of their respective rights and reciprocal duties. When conciliation has manifestly failed, recourse is had to the *strike* and the *boycott*, as war measures; and in certain extreme cases, as, for example, early child-labor, etc., the intervention of the state is invoked.

First and foremost, the union demands for its members, and, consequently, for the whole working-class, "a minimum wage,—a wage which, when expended in the most economical manner, shall be sufficient to maintain an average-sized family in a manner consistent with whatever the contemporary local civilization recognizes as indispensable to physical and mental health, or as required by the rational self-respect of human beings."

The second demand of the union is an "eight-hour work-day," or a progressive reduction of the hours of labor, so as to secure, as soon as may be, a normal work-day, affording to the workers "leisure to live, leisure to love, leisure to taste their freedom."

Another important feature in which the modern union differs from its predecessor is the existence of regular provisions for the support of its members when out of work or on strike. There are many who are under the impression that the chief business of trade-unionism is to foment strikes. That the direct contrary, however, is the case, is proved by the fact that strikes constantly tend to decrease in proportion to increased organization. According to the best available data, the sum spent in strikes is not more than 10 per cent of the total expenditure of the unions; while the care of their sick costs the unions half as much again as do strikes; and the support of their unemployed members consumes considerably more than double as much. It is simply impossible to calculate the enormous expense which the unions save the general public in ordinary times, or how much want and starvation they pre-

vent in times of great depression, or how much they save every country from agitation, irritation, and social hatred.

We have looked back to the beginning of the long struggle of labor for greater security and wider freedom; we have compared the condition of the free laborer in the past with that of the free laborer of to-day; and if the comparison is not more favorable to the modern worker it is, perhaps, because the effects of three centuries of practical disorganization cannot be overcome in a day. Since the trade-union has been accorded a moderate degree of freedom, it has made extraordinary progress; local unions have coalesced into national unions; the national unions of the several trades have united in vast national federations; and these federations are now organizing international relations destined to establish a unity coextensive with civilization, and, finally, to effect the full incorporation of the working-class into the ranks of modern society.

HUGH MCGREGOR.

CHINA, AND CHINESE RAILWAY CONCESSIONS.

CHINA, with an exceptionally fine climate, great mineral wealth, and vast fertile area, is, in effect, quite devoid of railways, as indeed of a thousand and one every-day mechanical devices, which more progressive countries deem essential to serve and to conserve a swarming population. Observing these backward conditions, the philanthropic Outside-Barbarian of other more newly-fledged nations looks over her fences with avid eyes, and itches to supply her needs—whether real or supposed—for a consideration. What he particularly craves, may be generically expressed, in modern phrase, as "concessions,"—a term implying lucrative, if vague, possibilities, while smacking of exclusive grant or monopoly. The concessions chiefly sought for, at present, are those covering railway or mining projects; but, whether the prizes be an exclusive license to vend quack-medicine or the manufacture of patent coffins, the foreign applicant waits.

As to railway possibilities in China, let us see what these are. The geographical "lie" of the country along the Pacific Ocean or China Sea is sufficiently like that of the Atlantic coast of North America to admit of using the latter as an illustration. By way of suggesting the mighty Yang-tse-Kiang River (leaving out of present account its great neighboring stream, the Hoang-Ho), one must first turn the Mississippi off to the eastward, so as to reach the Atlantic, below Savannah: then, near its junction with the sea, place Shanghai. Farther north, as Philadelphia is to New York, Peking would appear; while far to the south, below Key West, imagine Canton, with the British colony of Hong-Kong nearby. Stretching back, west from Shanghai,—past Soochow, Nankin, and other contiguous points,—up the Yang-tse, a jump of some seven hundred miles, or about as far from the eastern seaboard as is Memphis, Hankow would be found.

This sketchy outline will suffice for present needs; but, before considering it, one may, perhaps, reasonably pause to reflect that, between, or near, the few salient points here indicated, cluster the chief groups of China's estimated population of over three hundred millions,—benighted folk, resting content without the newfangled notions, whether

of creed or commerce, which we outsiders seek to force into institutions which were working fairly a thousand years before our ancestors emerged from the skin-clad, acorn-eating stage.

It must not be supposed that railways are absolutely lacking in the Middle Kingdom. Between Peking and its seaport, Tientsin, eighty miles of well-constructed double-track line have been opened within the past few months. There exists also the line from Tientsin north, along the Gulf of Petche-li, to the Kaiping coal-field at Tong-Shan, and beyond,—a total distance of about one hundred and seventy-three miles, —to Shan-hai-quan, where the famous Great Wall reaches the sea. This does not include about forty miles of partially constructed road extending farther north toward Moukden. Again, there is a trifling affair of some thirty miles, from a point on the upper Yang-tse, to the Tien-shan-pu iron-mines.

Altogether, China, with a population of over 300,000,000, has but 320 miles of railways; while the United States, with about 70,000,000 of population, possesses railways to the extent of 181,394 miles.

Confronting these figures, it is scarcely to be wondered that strenuous, ambitious foreigners, who suppose themselves knowing in railway matters, are anxious to go forth and "do something" for the Celestial Empire.

Additional railway-building is under projection; viz., a short stretch of about fourteen miles, from Shanghai to its deep-water port, Woosung, where, indeed, a railroad was actually built a few years ago, but torn up, as being ahead of time and objectionable to those vague, potent, geomantic spirits, the Fêng-Shui. Again, there is a proposed line of about eighty miles now under construction from Loo-kou-Chou Bridge, near Peking, southwest to Pauting-fu, near the important coal-fields of the Western Hills, whence, by aid of camel-trains,—said to employ ten thousand of those animals,—Peking draws her chief supply of fuel.

The immediate aim of the foreign railway-concession-seeker, however, concerns a more ambitious project; namely, a suggested trunk-line, of over seven hundred miles, extending from Peking, cross-country to Hankow,—a scheme which would include the above-mentioned Loo-kou-Chou and Pauting-fu section. This scheme possesses additional interest from the probability that, if built, an extension of nearly equal length and importance, viz., from Hankow south to Canton, would ultimately follow. If the inscrutable Chinese are capable of impatience, they would seem, in some degree, to experience that emotion over the creation of this proposed line from Peking to Hankow. Aside from

obvious internal political advantages, which would accrue therefrom, through thus linking more firmly together certain loosely bound provinces, another result is ever in mind; viz., that of ultimate escape and sanctuary for the government, if again hard-pressed by foreign invaders. Peking, the capital, lies perilously open to foreign attack; and the bitter lesson of the Anglo-French invasion, marked by the sacking and burning of the Summer Palace, may at any time be repeated. Though with the Celestials, a carefully ignoring memory is a studious cult, yet what was so recently threatened and so possible, at the hands of a small and theretofore despised enemy like Japan, has left something like a lasting impression. Then, too, there is ever rising, on the nearby Manchurian frontier, the dark, menacing cloud of Russian settlement, taking shape and growing, in even pace, with the rapid progress of the Trans-Siberian railway extension.

If, in time of sudden storm and stress, the imperial government may take the wings of a railway, and flit to Hankow, leaving line and bridges wrecked behind it, great possibilities for a little longer slumber, in customary ease and indifference, unvexed of outside harassment, will offer in that remote centre of supply and reinforcement.

For the construction of this ardently desired Peking-Hankow line —as, indeed, of any considerable railway work—the Chinese need, and must invoke and obtain, ample foreign financial assistance. To such end, the higher councils at Peking have appointed an agent, one Shêng-Tajen, who, as the director-general of the imperial Chinese railway administration, has been clothed with full powers to adjust and negotiate,—a phrase meaning, when reduced to final analysis and expressed in Western slang, to "raise the wind."

His Excellency Shêng is a rising star in the murky firmament of Chinese politics. One might, perhaps, classify him as already risen, but that his policy with foreigners, by which his orbit must be measured, has yet to wait the test of time. Some there are who regard him a great potentiality of the future, seeing that he looms larger now than even the Grand Secretary, Li-Hung-Chang. The latter labors under the increasing disabilities of advanced age, as well as under those hampering, myriad jealousies which ever encumber the waning career of a once masterful and ambitious leader. Other observers believe that Shêng is doomed to early collapse,—at least in his present high official function,—through having rashly promised what circumstances may not permit him to accomplish, and represented to his government potentialities of grasp on foreign, as well as native, capital unwarranted by fact or reason.

Astute, progressive, daring, with the acquisitive tendency largely developed, Shêng-Tajen is full of aggressive force and picturesque possibility. As yet of full vigor, of large wealth, and but little over fifty years of age, he may, if circumspect or if effectively guided, reach any place of ministerial power and control that China has to offer. He is already an official of metropolitan rank and a director of the Court of Sacrificial Ceremonies. For somewhat more than a year past, Shêng has been in active negotiation with various foreign delegations in reference to his railway projects, but, thus far, with little or no tangible result, —thanks, as foreigners are disposed to say, to a too-inflated, overreaching estimate of what he and his country can offer or accomplish. It is rumored that his government is already growing restive over the delay in the fulfilment of his pledges; and he is not without jealous rivals, who are known to be intriguing against him.[1]

Those foreign delegates who have frequented his *Yamên*, or council-chamber, will not readily forget their novel and arduous experience. Long, chill audiences, in donjon-like obscurity, with struggling effort at concrete, confidential negotiation, conducted aloud, through interpreters, in languages of which the one affords no counterpart to any technical or business phrases of the other, before a mob of alert, native hangers-on, who listen to one's secrets through open window and doorway,—these are incidents that remain in mind. Nor will be ignored, the memory of a keen-faced, courtly mandarin, with half-closed, yet always alert, eyes, whose ceremonious manner and easy affability never disguised a hard, tenacious purpose. Large foreign cash advances, at trivial interest, with next to no allowance of foreign profit, or of ordinary safeguard against native control of funds or native management of properties,—these, when stripped of complimentary rhetoric, were always conditions precedent to His Excellency's negotiations.

Shêng-Tajen is easy of access, and encouraging,—especially to those of sanguine, acquiescent temperament, who are ready to regard an unsubstantial nothing as a gain. A jest, principally one of a cynical cast, seems to be to his liking; and, at his table, he is a charming host. His business invitations have been somewhat freely offered to foreigners, though, far more circumspectly distributed than were those of Viceroy Li, who, in his recent tour about the world, appears to have been full of promises to mankind.

[1] Late China advices, received since the foregoing was written, indicate that Shêng's powers have been somewhat abridged by the appointment of another imperial railway commissioner—"for the North."

Foreign response to Chinese solicitation has been equally profuse. An American party[1] of five found themselves crossing the Pacific in December, 1896, in the same vessel with an English group of like size and intent. Another party, of mixed Canadian and American complexion, just missed the ship. At Shanghai, it was learned that the representative of a strong German syndicate had recently departed by special steamer for Peking; other American rivals were known to be on the ground; and later, French and Belgians arrived. As for the English, they are never lacking, being well to the front in affairs of the Far East; while Russians may be always reckoned on as burrowing effectively in any Asiatic background.

The philosophical observer who may chance to sojourn at Shanghai during the midwinter months, when the Peking route is blocked by ice in the harbor at Tientsin, will find a curious interest in the study of the typical concession-seeker. On arrival, he is uniformly impressive, secretive, and *affairé*, with a tendency sedulously to seclude himself, and to call for maps, interpreters, writing materials, and telegraph-forms. After some days, or weeks, of private pertinacious industry,—possibly with native official audiences reckoned in,—he emerges and expands. Guarded fraternization with suspected rivals may then ensue, symptomatically manifested within the precincts of the hospitable Shanghai Club,—to the distinct betterment of its bar receipts. Later, the more solvent of his kind take ship, homeward bound, and sail empty away. Some, however, having breathed the native air too long, remain,—victims of the well-known China Hallucination,—and, so long as their funds hold out, chase the ever unattainable rainbows of illusive hope. Others, of the lesser sort, lie stranded and helpless, content to accept any Chinese employment, however trivial, or to snatch whatever crumbs may chance to fall from China's none too hospitable table.

What with all these "foreign devils," plus their respective ministers and consular officials, swarming and buzzing about the ears of the bewildered mandarins the wonted "sacred everlasting calm" of the latter is sadly disturbed. It is hinted that, in the strange, gloomy, midnight sittings of the government *Yamêns*, within the inner Imperial City, at Peking, full and free anathema is continuously passed upon the vexing foreigner and all his works. Nor are heart-felt, native longings unexpressed for those good old days, when the Outside-Barbarians were

[1] The writer accompanied these gentlemen, in the capacity of legal adviser, charged, primarily, with the investigation of a preliminary contract, which an agent, already in China, was supposed to have secured for an American syndicate.

literally such, and could be kept so; when officials who had struggled to the top of things Chinese might remain there in peace, enjoying their indolent, world-old policy of *laisser-faire*, with incidental and productive "squeezes."[1]

Whether the Chinese may or may not wish him away, the foreigner is always present and persistent; and, as is usually the case where the white race has to do with brethren of another complexion, he maintains a relentless pressure, with the frank and not too delicate diplomacy ordinarily characterizing a "grab-game." Each nationality invariably poses as China's first, best, and only unselfish friend, and ever whispers impressive warning against each and all of the others. Russia is at hand, standing effectively upon the substantial service she has rendered in blocking Japan's retention of Port Arthur and the Liautong Peninsula, and upon her timely support of China's recent foreign loans. England remains strong in her great prestige, her trained and permanent consular officials, her chain of Anglo-Asiatic financial agencies, and her handy navy, ready to support the claims of British subjects. Germany seeks to look in; while France appeals for greater elbow-room along the frontier she has grabbed in Tonking, and is ever clamorous; asserting, as to railways, a shadowy treaty right in favor of her subjects. The United States, China's nearest sea-neighbor,—and, of all the group, her most natural ally,—waits, like a poor relation, in the background, devoid of local financial agencies, and represented only by a hap-hazard, rapidly shifting diplomatic and consular service.[2] Her citizens, while modestly blinking reference to their Chinese exclusion laws, and to occasional home massacres of Chinese subjects, cling, with almost tender assiduity, to traditions of early, amicable international relations.[3] They

[1] That Chinese officials do "squeeze," is, unhappily, beyond dispute. The system under which they exist—with its requirements of a certain state, and multitudinous hangers-on, to be maintained on inadequate and uncertain salaries—necessitates this practice. One should look rather at the many really fine qualities of the typical native character outside of officialdom. Any Chinese, even the most humble, who fails to pay or honorably adjust a debt must inevitably "lose face" before his fellow-men; while nearly uniform respect and sympathy are shown for all the family ties and duties. So, too, patient, frugal industry, innate courtesy, and a certain fine self-containment are almost universally found in all ranks of life. The Foreign Devil, with his Boodle Aldermen, his *Mairies*, Local Parish Boards, or *Stadtrathe*, should not be too swift in casting the first stone at China's official jobbers.

[2] In respect of Mr. Denby, the Minister, and Mr. Jernigan, the Consul-General, who happened recently to be in office, no improvement was needed. These gentlemen uniformly rendered zealous and capable service in the protection and advancement of all American interests.

[3] *Temp.* Burlingame.

ring the changes on their native country's single-minded lack of Asiatic territorial design, and upon the general superiority of American manners, machines, and methods, whether as adapted to railways, or otherwise.

To all this various and polyglot clamor from the outside world, the Chinese oppose chiefly—among other obstructions—two potent things; viz., a jelly-like inertia, and a soothing, whispered non-commitment. It has been surmised, indeed, that the Celestial finds a certain sly diversion, as well as profit, in thus baffling the foreigners, and in playing off one against the others. Nor are the Chinese, after all, lacking in reasonably sound advisers among foreigners, where the business in hand concerns a nationality other than that immediately consulted.

An absurd inflation of native notions as to the value of what China may concede, founded upon the usual vague, and often child-like, native conception of means and methods, is but the natural result of the foreign commotion about her doors. Little or no progress is, or can be, made. At the present time, the small Shanghai-Woosung line, although provided with material and a staff sufficiently large to have insured its completion months ago, is not yet begun; the Pauting-fu-Loo-kou-Chou section languishes; and the greatly desired Peking-Hankow line is still within the region of fumbling preliminary negotiation. From time to time, within the past year, rumor has confidently settled it that this last-mentioned work has been definitely confided to the Americans,—a belief naturally heightened by the fact that Capt. Rich, an engineer of their nationality, recently made a preliminary survey of the route. Latterly, however, after a varying suggestion of English, French, and German contractors, the Americans have faded out of sight; and now, only the Belgians remain at the fore. Indeed, it would appear that certain reckless persons known as the Belgian Syndicate—said to be a group of manufacturers whose primary object is to market their products in China—have closed a contract for the line with Shêng, substantially on his own terms. Their rivals may comfort themselves with the reflection that "fools rush in where angels fear to tread"; but nothing more substantial is left to them.

After a careful scrutiny of the terms of this Chino-Belgian agreement, one is at a loss to understand how men of business could thus have placed themselves and their funds in Chinese hands; or how a contract containing virtually all the unsafe and objectionable features which other negotiators have uniformly declined to consider could thus have been swallowed whole. By many observers in the East, it is sur-

mised that the present contract arrangement cloaks and blinds some important political move of other nationalities; that Belgium, an unobtrusive nation, having no territorial designs, has been put forward as a figure-head, behind which will appear later those who, in dealing with feeble China, rely on more potent forces than mere contractual stipulations, to shape and define both claim and remedy. Yet this fanciful theory has, apparently, but little real substratum of fact. Probably a more exact explanation of the Belgian arrangement is that impulsive negotiators, anxious to outstrip their rivals in a race, have hastily grasped the shadow rather than the substance of the prize. His Excellency Shêng will now, for at least a short while, point with pride to the apparently successful result of his trading, the hitches in which, thus far, have threatened and spurred him with what is abhorred of all Chinese, viz., the chance that he might "lose face" before his countrymen. It is safe to predict that he is still doomed to this mischance, and to a grievous disappointment in the business generally; as, also, that the Belgian contract will probably fall apart, on its first serious strain,—the paying over, in January next, of the first instalment of the promised 4-per-cent loan of £4,500,000, for the Chinese to play with. Already, every indication points to serious friction. In its initial stage, the contract was protested by the German, English, and American ministers at Peking, and, after being withdrawn, was subsequently allowed in an amended form. Now, as later advices show, the Belgians themselves seek modifications of their obligations.

Those familiar with Chinese ways and possibilities will experience no surprise if many long years elapse before the Peking-Hankow railway takes more definite shape. China herself is well used to waiting. She should, of course, build this larger system from native resources, like her existing smaller lines. But, alas! recklessly encountered wars are costly. When China has fully raised and paid the full Japanese indemnity of Taels 200,000,000, her funds and credit, with which she might have comfortably procured adequate railway systems, will have virtually vanished. What is her prospect now of further borrowing from the foreigner, whether for railway construction, or for other purposes? Her existing foreign debt, amounting, in 1896, to £38,630,000, and incurred, mainly, to meet the war indemnity, was placed abroad, on favorable terms,[1] chiefly, because it was secured upon the hypothecation of the receipts of the Imperial Maritime Customs,—a department managed with excellent and honest business methods, in

[1] The several loans having been at 6, 5, and even 4 per cent annual interest.

foreign hands,[1] absolutely untrammelled by native interference. The Maritime Customs revenue, during the year indicated, produced some £3,386,000; and, as the interest service of the loans, with some other charges for which provision must be made, absorbs about £2,900,000 of this sum, it follows that the available margin apparently remaining—less than £500,000—is not sufficient to base any considerable further security for loans upon; especially as every penny of this possible surplus is sorely needed for other than interest-paying purposes. Yet even this margin, which it was hoped would grow with the natural increase of import duties, and by reason of the opening of new treaty ports, now appears to have waned, if not to have totally vanished, owing to the continued decline of silver. Thus, in the case of a new foreign loan for railway purposes, China would now seem to have nothing free to offer, by way of security, other than a mortgage upon the railway property which may be created by means of such loan. The government might, it is true, give to any bonds which are to be issued upon new railway projects a more effective standing, by stamping or otherwise identifying them as of its own obligations; but thus far this plan has not met with official approval. If sanctioned, it would doubtless evoke opposition and protest from holders of the existing Chinese bond obligations.

Quite aside from provision for immediate railway purposes, the Chinese officials have of late been bestirring themselves to place and procure a new foreign loan. There is a balance of one moiety of the Japanese War indemnity—Taels 100,000,000—still due: its payment, on or before May 8, 1898, *i. e.*, three years from the date of the treaty, will not only save interest charges of Taels 2,750,000, but will also secure a result ardently desired by the Chinese, viz., the evacuation by the Japanese of Wei-hai-wei. To meet this situation, a loan of £16,000,000 is now sought. It has been freely intimated to the outside world, that those who will provide this advance may confidently look for substantial favors in the way of concessions, covering the building of railway lines, other than the one which has been promised to the Belgians; for example, the proposed railways from Hankow, southeast to Canton; from Shanghai, west along the Yang-tse; and from Shan-hai-quan, north to Kirin, or to some other connection with the new Trans-Manchurian extension of the Russian Siberian railway.

[1] By the well-known Sir Robert Hart, who, through years of effort, has built up an admirable and effective service, with a large staff of assistants, chiefly European.

These concessions are, abstractly speaking, attractive; but, seeing that their acquisition and enjoyment are dependent upon the obligation to furnish financial accommodation to the Chinese of such considerable magnitude, the question of security for the funds to be advanced in the proposed loan or loans comes immediately to the front.

As we have seen, the margin of customs receipts now left unhypothecated is too scant to figure upon in any new loan business. How, then, is a further imperial borrowing to be secured? To fit the case, or to help it out, the Chinese have suggested a lien upon three hitherto unmortgaged sources of government revenue; viz., the land tax, the salt tax, and the *likin*. These items of revenue we have not space to discuss at length. It will be sufficient to say that they are vaguely established and difficult to reach, and that, in any case, resort to the pledging of them indicates desperation on the part of the Chinese, and means the availment of a last resource. Unlike the Maritime Customs receipts, the several taxes here referred to are administered wholly by the corrupt and careless hands of native officials, with the result that they produce invariably uncertain and always inadequate returns. Honeycombed, as they are, with moss-grown claims of vested rights, with underhand intrigue, and with barefaced "squeezes," it is and always will be exceedingly difficult to bind them with an adequate, effective, and comprehensive lien. To touch these revenues at all, especially under the intolerant searchlight of foreign investigation, means certainly to evoke trouble, and to disturb darksome, burrowing things, the first impulse of which will be to turn and sting. A social and political hornet's nest, of this kind, is not lightly to be stirred up by a government so unstable as is that of China.

Those who risk their money, skill, and labor in the creation and operation of a railway ordinarily ask and receive compensation not only in fairly secured interest upon any incidental bond-loans, but in a reasonable profit upon the cost of construction, and in some chance of participation in such future surplus earnings as their after-management of the railway property may produce. The Chinese, while uniformly demanding that the proposed loans upon the railway concessions shall be in large sums and at slight interest, have as yet declined to consider an allowance to the foreigner of profit upon construction, except in small percentages on possible purchases of material. They even decline to allow the foreigner to take a contract to build; preferring that his agreement should be to become an employee of the government for such building. Chinese laws, as at present established, rigidly preclude

aliens from holding shares—through which provision for participation in future earnings might be made—in any native railway enterprises.

Obstructive conditions of this character underlie all negotiations with the Chinese on these subjects, and thus far have been tenaciously insisted upon. They arise, partly, from the childish or inflated idea that foreigners are ready to rush in and take railway concessions at any price, and partly—so far as the restriction against foreign share-holding is concerned—from the native dread of outsiders obtaining rights, even if only through a share interest, in anything on Chinese soil. Negotiators from the outside world, of ordinary business experience, have found these obstacles insurmountable. The Belgians, as we have seen, have recklessly "jumped" them; but where these hardy traders will land, remains to be seen.

Probably, the final outcome of China's railway-extension problem will be the construction by the Chinese themselves of such trifling bits of road as may be most urgently needed, and for which payment may be squeezed out by hook or by crook. Longer lines, or more comprehensive systems, must wait their chance indefinitely, just as so many imperatively necessary improvements have done in the past ages of China's strange career. But even short lines, if well placed and constructed, and left under exclusively European management, like that of Mr. Kinder, the English engineer, should prove fairly profitable, or at least self-supporting. The existing railway from Tientsin, *via* Kaiping, to Shan-hai-quan is reputed to yield a profit in its operation; while the new road from Tientsin to Peking should have an excellent traffic, especially in summer. Its present service, although not fully established, is said to have invariably crowded trains. So, too, the little Shanghai-Woosung line, if, by any favorable chance, it can be pushed on to Soochow, Nankin, etc., should do a large business.

As will have been observed, it seems hardly worth while, under existing conditions, for foreigners to consider Chinese railway projects; but, even if these conditions were favorably modified, some features would still remain, which should not be overlooked. Large areas of the country affected by the proposed railways are now most economically served by ample labor supply, of the cheapest kind, operating sufficiently with mechanical aids of the most primitive forms. Whether by packs for men and animals, by wheelbarrows,[1] or by multitudinous craft of all sorts on

[1] There are four thousand of these, with a capacity of five hundred pounds each, licensed in the foreign concessions of Shanghai alone. They are found everywhere throughout the interior. Gen. Wilson in his "Travels in the Middle Kingdom,"

the great network of rivers and inland waterways, a vast inland commerce is carried on; while great fleets of sea-going junks exist for the coastwise trade. In the course of a few years, any system of railways should absorb the chief part of this trade, or, at least, such of it as may be conveniently reached. But this could only be accomplished through the establishment of extremely moderate rates; and these, of course, must be receivable in a constantly depreciating silver currency. Having this last point in mind, it will be appreciated that any railway venture in China, with foreign-held bonds, on which annual gold interest payments must be made, will bring annual moments of anguish to its managers.

Again, in large areas of the country, the population exists on the day-by-day or hand-to-mouth basis, with little or no surplus for outward shipment, and no margin for the purchase of additional inward-bound supplies. While the presence of a railway would gradually improve these conditions, and so lead to the creation of an increase in local traffic, this would necessarily take time, especially with a people so poor and so backward as the Chinese of the interior.

But the inland commerce of China, as a whole, is enormous, notwithstanding that it exists under conditions of this character, and that it is also throttled by the *likin*. The latter is an inland-barrier tax, imposed, with more or less arbitrary exactions, by local mandarins, who have, or claim to have, vested rights at all important interior points, and is a ruinous burden which should disappear from the path of a railway, as it has done from the routes of foreign vessels in the Yang-tse-Kiang and other navigable rivers. Its absence would create a strong stimulus to trade in any territory immediately affected; but in China *likin* collectors, and like obstructionists, die hard.

Railway construction, in Middle China at least, presents no great difficulty, except from river-crossings, which are numerous and vexing; the country being generally rolling or level. Labor is plentiful and of the cheapest, but of the least skilled kind. Much of the material, however, must be procured, for the present, from abroad, as the great delta is treeless, and no facilities are as yet afforded for procuring timber from the mountains and upper rivers of the West. The Chinese iron-works at Hanyan, near Hankow, are now under foreign management turning out steel rails in moderate quantity.

says that the product of the Shan-si coal-mines is distributed by wheelbarrows for hundreds of miles. In some cases, they are equipped with auxiliary donkey-power, and often are rigged with a sail.

As to miscellaneous business enterprises, for which foreigners are seeking concessions or exclusive grants, there does not appear to be much scope for these. It has been sought, for example, to obtain a monopoly right for a cigarette factory, to be established inland, away from treaty ports; but, although high Chinese authority has expressed the opinion that such a monopoly could be granted, the business has not been proceeded with, because it has been thought impracticable to exercise exclusive rights of this kind, even if apparently obtained. Rival foreigners, importing like goods through the various treaty ports, whose trade might meet the obstacle of an interior monopoly, would clamor lustily, invoking, through their diplomatic representatives, the "most-favored nation" clauses of their respective treaties. Then, too, local native merchants are stiff-necked, and would promptly boycott the product of any monopoly factory which might seek to interfere with a cheaper market through the ports. Under these circumstances, which would as well fit other cases, foreign industries in China, such as silk filatures, cotton-mills, machine-shops, etc., have thus far modestly established themselves in the treaty ports,—as, for example, in the foreign concessions, at Shanghai,—seeking merely a proximity to markets and cheap labor, which are open to all, subject to the ordinary competition of trade. They, like home enterprises, depend on skilful management rather than on a monopoly.

In business, generally, China offers no greater openings than may be found at home for foreigners whose skill, energy, and foresight count for as much in one place as another. The great American mercantile houses, once so prominent, with their tea-hongs, banks, and steamship lines, have vanished, leaving only commission agencies to act as intermediaries for the Chinese, and to compete with English and Germans, not to speak of traders of other nationalities, who are everywhere on the ground, ready to cut off corners from profit percentages, and, by the aid of cable credits, to deal with minute margins of profit. As for the chance of employment under natives, next to nothing of this kind exists. Any foreigner going to China to seek work, whether as a trained specialist or a mere employee, at once raises in Chinese minds the presumption that he comes because he is not fit to survive at home. Americans like Mr. Walter Kennedy, now in charge of the Hanyan iron-works, Capt. W. W. Rich, who surveyed the Peking-Hankow line for the Chinese Railway Administration, Mr. John Dodd, the banking expert, and Mr. Shockley, the mining engineer, and others, of various nationalities, who might be mentioned, are exceptional cases. These

gentlemen, selected for their character and capacity, and, above all, especially invited by the authorities, readily inspire native confidence, and can find profitable engagements, as, indeed, men of their kind may readily do at home. The foreigner who *volunteers* his services in China's affairs is foredoomed to failure, whatever his degree or fitness.

After all, what do the Chinese want of the outside white races? Nothing, it may be safely said; nor will they accept aught from us but what is forced upon them through stress of circumstance. Inert, conceited, jealous, and suspicious, they are satisfied with their own environment, and are quite content to follow out their mysterious way to such destiny as crumbling, world-old institutions, groping in the dim light of the mouldy maxims of Confucius, may have in store. But the fates would appear to have decreed otherwise.

Within a few months past, Russia's ungloved hand has been shown again, taking a still stronger grip on China's northern frontier. The Russo-Chinese treaty, recently divulged, shows her to be vested with full and momentous rights in and throughout China's northern provinces; and now, throwing aside the mask which has heretofore obscured it, the great Trans-Siberian railway is on its way, across Manchuria, toward some more convenient port than Port Arthur, instead of to the more remote and ice-hampered outlet of Vladivostock. Already Russian railway-construction parties, guarded by military posts destined never to retreat, are swarming forward into Chinese territory, on this latest great march to the sea. China, powerless in fact, and bound by stipulated recognition of Russia's past services, may not openly object, much as she may inwardly writhe and squirm over such incroachment on her sacred soil. Russia paid her in advance, when the heavy paw of the Northern Bear barred the way of further Japanese conquest, and when Russian aid forced the indemnity loans upon unwilling markets. England, watching this new Russian progress, has, thus far, only sputtered, with startled and inept protest. But those who know her and her resolute ways and traditions, who appreciate the tenacity of her protection of her trade, and perceive the menace to her interests in China implied by Russian occupation of Port Arthur—and of Korea, as a necessary incident—will not suppose that the masterful English are long to sit still in patient tolerance. Doubtless a little further time will disclose some check, or strenuous counter-move, now in state of rapid formulation in British councils. England, in any case, must keep sharp watch and ward on Shanghai, as on the mouth of the Yang-tse-Kiang, and, indeed, upon the whole great valley of that mighty river; nor will it suit

her policy to lightly suffer any Northern rival to Hong-Kong to be built up at Port Arthur.

Sometime, and without great delay, these puzzling movements of unchained political forces may compel a partition of poor, bankrupt, drowsing China. When such a time arrives, Russia will be found modestly demanding the northern provinces, with Peking, the Liautong Peninsula, and Korea thrown in, as help-weights. England, of a certainty, must claim the Yang-tse Valley, and liberal territorial allowance, near her southern colony of Hong-Kong. She will need, too, all she can obtain, to broaden out her buffer-states of Burmah and Siam, as against the French, who will be, as in the past, none too modest touching the enlargement of Tongking. Germany's aims are indicated by her recent seizure.

Where then, will be young, lusty, and aggressive Japan, with her strong new navy, and her armies of highly trained and fearless human wasps, ready, close by, across the way? What may she have to say, and what particular bone, from the dismembered carcass, will satisfy her? There are sentimental dreamers, who discern in the Japanese an ultimate design to link their destinies with those of their Chinese neighbors, and so to organize and consolidate against the wide outside world of the white races; to act as a pagan Joshua, who may lead the Celestial Israelites out of the desert of their present floundering fate. Be this as it may,—for the Asiatic future is as yet too obscure to lightly venture forecasts upon,—this much, at least, is certain: The new Japan must be considered in any present or future Asian question.

But poor China! "Was für ein plunder!"

And where, in all this wreck and chaos of a crashing and dismembered empire, shall we find the undaunted concession-seeker? Doubtless, as ever, chasing rainbows, and, as is his wont, cabling home, "Prospects better, remit funds."

CLARENCE CARY.

IS IT WORTH WHILE TO TAKE OUT A PATENT?

Is it worth while to take out a patent? Not if you can possibly avoid it. It seems a thousand pities; but this appears to be the conclusion reached not only by the vast majority of those who have taken out patents, but also by those who are on the eve of filing their claims for government protection. A small minority has been successful in reaching that good land supposed to be flowing with milk and honey; but the average patentee has gone through dreary years of litigation without even sighting the promised land.

Some people do not believe in patents at all; saying that the patent system is a creature of statute law and should be abrogated entirely. This position is untenable, for the one reason, that the incentive to all work is the hope of ultimate cash returns; and a patent, potentially at least, is valuable, the development of the art or science to which the work attaches being merely an incident.

In the present state of the patent law, if one can keep his process to himself, it is undoubtedly better to do so. Most inventions, however, cannot be guarded by lock and key; and in many, if not all, cases, it becomes necessary, for self-protection, to take out patents.

One of the main difficulties in the way of the patentee lies in the fact that it is not easy for the best lawyer to draw a patent so that his client will not speak reproachfully of him. It takes a very experienced hand to avoid defects which will nullify the patentee's proper advantage. An omission is fatal; an addition is fatal; and a vagueness is fatal.

In this paper I shall undertake a brief review of the present state of the patent law; limiting my remarks to cases involving chemistry, and showing where matters might be improved.

Many illustrations of omissions vitiating patents can be found among Webster's historic cases. There is the patent for the manufacture of verdigris. The method described in the specification was fully sufficient for making verdigris; but the patentee had been accustomed clandestinely to put acid into the boiler, whereby the copper was dissolved more rapidly, although no better or cheaper product resulted. The patent was held void.

On the other hand, if a patent is so long, and the claim defined by so many details, that another inventor can attain substantially the same results by the simple omission of one of the points covered by the original patentee, another patent may be evolved from the first without infringement.

Hence a patent lawyer has to steer very narrowly between the Scylla of fatal brevity and the Charybdis of excessive loquacity, and all this, probably, in the face of opposition in the Patent Office.

As an illustration of the shortening of the process in one particular, the Dualin Powder Case may be cited. Dualin is a yellowish-brown powder, resembling in appearance Virginia smoking tobacco. It consists of cellulose and other ingredients mixed in different combinations. The cellulose was prepared by treating sawdust with acids, and then boiling the mixture in a solution of soda, drying and further treating it in accordance with the patent. The defendants admitted that they used sawdust, but said they never treated it with any acid or alkali. As the plaintiff's patent made such treatment essential, the fact that it might be dispensed with not being mentioned, and as the defendant used nothing in the place of treatment with acid and alkali, it was held that there was no infringement.

In the main, and in time, the courts do substantial equity; and if it can be shown that the particular part omitted was not the essence of the patent, a new patentable process cannot be evolved from the first. This is shown in the Aluminium Case. The process, in short, was the passing of an electric current through a fused bath composed of aluminium compounds in the presence of a metal more electro-positive than aluminium. The defendants simply omitted the artificial heat given to the bath, according to the patent, they having discovered that electricity itself evolved enough heat to maintain a proper temperature. The court held that:—

> **"Even though the omission of external heat might be a commercial improvement, nevertheless, it was within the scope of the patent. To hold otherwise would impose upon the patentee of a process the necessity of stating not only the process, but the best apparatus for that purpose. This would be absurd."**

But it entailed years of work to reach this decision.

One of the favorite tricks of persons desiring to infringe a patent is the addition of substances more or less immaterial or useless. Although the courts, in the long run, stop this evasion of patent rights, still the patentee has heavy lawyers' and experts' bills to meet, in order to hold the infringers to legal accountability.

In this connection, the decisions in the Glycerine Cases are *apropos*. It had been discovered that if fats were heated with water, under sufficient pressure to prevent the formation of steam, the decomposition of the fats into their constituents of glycerine and the characteristic acid could be directly effected. The court said :—

"It is probably true, as contended by the defendants, that, by the use of a small portion of lime, the process can be performed with less heat. It may be an improvement to use lime for that purpose; but the process remains substantially the same. The patent cannot be evaded that way."

Again, a patent may be rendered faulty through ambiguity, or general indeterminateness in the specifications. An experienced lawyer, however, rarely falls into this bottomless pit.

Among patents adjudged insufficient and unintelligible, the Magenta Case offers a striking example. The inventor, it would appear, recommended that aniline be mixed with an oxidizing agent, that the mixture be then allowed to stand for some time, or that the process be accelerated by heating. This, when construed, claimed to effect a particular object by two processes, one of which, it was proved, would not work. The plaintiffs were forced to admit that no beneficial result could be obtained without applying heat. The court seemed loath to rule against the patent, but applied the law strictly and against it.

It was through the element of uncertainty that acid magenta was brought into court. Magenta—sometimes called fuchsine, aniline red, rosaniline, roseine, or rubin—is one of the older aniline colors. Primarily a cotton dye, it was, by the patent, rendered applicable to wool-dyeing. The alteration was to be accomplished by a treatment with sulphuric acid of the *proper* strength; but the patent claim was drawn too broadly. The product claim was sustained.

These cases are instanced in order to show the minutiæ that have to be remembered and guarded by the lawyer in drafting a patent. Often the crux of the case is some relatively minor point. The writer has seen the opposition examine a patent as with a microscope, every word being scrutinized, and the expert dragged forward and backward over the case in the hope that a weak spot in the patent might be found, or that he might be mystified, or become entangled in his speech.

The doctrine of chemical equivalents is frequently applied in chemical jurisprudence, and is often abused. It signifies the known substitutes that effect an evasion, more or less adroit, of the rights of the patentee. An easy way to use a process and yet avoid the patent is

supposed to consist in finding some equivalent of the protected chemical, which equivalent is not covered by the patent. To illustrate, I shall cite Martin's Patent—one of the oldest cases. This was a patent for making artificial stone by the use of potash and sulphuric acid, combined in a certain way. The defendants used boracic acid; but this was held to be tantamount to using sulphuric acid. One part of the judgment says:—

"It is well known that there are two or three substitutes for a crank: this is just as well known as that 10 and 6 make 16, and that 8 and 8 make 16. Wherever you can apply the exact sciences, you can frequently predict results without the slightest difficulty. I do not think this doctrine applies altogether in the case of chemistry. You cannot, because sulphuric acid will succeed, tell at all that nitric acid will succeed, until you have tried it. You cannot anticipate the result: it is a mere question of result upon experiment."

By this doctrine—the doctrine of chemical equivalents—the sulphuryl group has been held the equivalent of bromine or chlorine, benzine has been allowed as a substitute for water, and sulphuric acid has been held equal to tartaric acid.

Mr. Justice Grier draws a picture of the unfortunate way in which chemical equivalents are often made. In the Goodyear Case, he said:—

"Suppose that, before Goodyear's discovery, a manufacturer had taken to a chemist's laboratory some India-rubber, sulphur, and white-lead, and asked him to make vulcanized rubber. The answer would have been that it was impossible. Now, suppose that he had put into that chemist's hands the specification of the rubber patent. The chemist can now suggest many changes in the process which may produce equivalent or even better results. He could suggest some other metallic oxide which could perform the office of the white-lead; that possibly arsenic or magnesia, or some other metal of earth might be substituted for sulphur. Yet no one, whose perceptions are not perverted, can fail to see that all such changes have their foundations on the patentee's first discovery, and start by appropriating or pirating it."

With all these difficulties besetting the path and endangering the life of a patent, is it any marvel that so few patents survive? Is it not rather a wonder that more are not lost in the many possible pitfalls? Remedies above criticism are not easy to suggest; but the following points are offered for consideration:—

In the first place, patents should be more closely scrutinized at the Patent Office; and we should not be open to the charge made by Johnson in his book on patent law. Speaking of the United States Patent Office, he says: "No application for an invention possessing any feature of novelty or utility is refused, if perseveringly and skilfully prosecuted." The writer has heard it related that a patent was given in the

United States for the prevention of explosions of kerosene oil, by placing a potato in the containers.

It appears that patents are more easily obtainable in other countries. They are said to be granted in Belgium without previous examination, at the sole risk of the applicant. To-day, in the United States, it is difficult to induce financiers to invest simply on the strength of a patent having been granted, because it is scarcely possible to make out a *prima facie* case. This is certainly unfortunate, as there are many things worthy of being exploited which must remain neglected simply because it is becoming practically impossible to convince capitalists that any process whatsoever has a good fighting chance. They have become embittered by reason of the cost of maintaining their rights.

The German Patent Office guards the issue of a patent more carefully. When the application is filed in Berlin, it passes an examination, and is then mentioned in a Patent Office publication as "ausgelegt." The patent may then be attacked by interested parties; and if, after all has been said and done, the Patent Office decides in its favor, the patent is almost *res adjudicata*. This gives a considerably better standing to a patent than is the case in our country.

The Victorian statutes ordain that when the patent-law officer is of opinion that a patent should be issued, the matter is to be advertised for two months, and that within that time those who object to its issuance must file notice accordingly. The objector is supposed to submit all his evidence, and to argue the case fully and accurately at the proper time. The examiner, with the consent of the Treasury, may obtain the assistance of an expert, who is to be remunerated for his services.

It has been said again and again that a patent has no value until it has sustained a drastic course of litigation; and it is true, also, that all valuable patents are brought into court for construction, if there is a good fighting chance for the litigation.

Perhaps one of the most unsatisfactory features in our patent-law system is the use of the expert. A determined effort is now being made to readjust the standing of the expert in medical jurisprudence; and it would seem that at the same time a similar readjustment should be made in chemical jurisprudence. The law should provide for boards of official experts, whose findings could be laid before judge or jury, not as partisan evidence, but as scientific judgment on matters requiring expert testimony. Thus the data could be brought into the right perspective.

Cross-examination has come to be absurd in point of length and ir-

relevancy. Recently, the writer was cross-examined for five days, to demonstrate a point that might have been settled in less than as many minutes. This method of excessive cross-examination can be cured by agreement among the lawyers. When they agree to have short and concise examinations the point can be carried.

Or, if counsel on both sides would agree to use the blue pencil on the typewritten evidence, cutting it down to the salient and essential features, much time might be saved; and the case could then be presented to the judge printed in something like portable shape.

Further, a great deal of annoyance might be saved if those drawing patents would take the trouble to consult specialists in their particular lines. Again and again, the writer has seen chemical patents which a mere tyro in chemistry could have corrected. The last instance that came to his notice was that of a strictly chemical patent drafted by a lawyer whose exclusive specialty was electrical inventions.

A patentee of a chemical process labors under a disadvantage that cannot be measured. So soon as he publishes his process or product, he tells the world how to accomplish a more or less desirable end. If another then uses his process, the patentee has a number of points to prove against the defendant. In return, the patent itself is attacked; the burden being thus shifted to the patentee, who must prove that his patent is good. And last, the question of damages is peculiarly difficult of equitable adjustment.

Two of the successful inventions of to-day are the unpatented enamels or varnishes, pegamoid and pantasote; and this is because they find a better protection in secrecy than in a government patent.

This article has given only a few of the tortuous steps that the patentee is obliged to follow. If (1) chemical patents, when issued from the Patent Office, possessed a better standing both in court and in the minds of capitalists and financiers; if (2) a board of fair and honorable experts were established; and if (3) the litigation establishing the rights of a patent were abbreviated,—then I should be inclined to answer in the affirmative our question, "Is it worth while to take out a patent?"

HARWOOD HUNTINGTON.

EDUCATION IN HAWAII

THE education of the people is not a new undertaking in the Hawaiian Islands. The historian says that the first printing in Hawaii was done January 7, 1822; and he adds that it was work on a school-book. It is related that, when the missionaries persuaded the king and chiefs to undertake to learn to read and write, "the king directed two or three of his more intelligent subjects to try this matter, and see if it were safe, in which case he himself and others of rank would follow." The results of the experiment seem to have been satisfactory; for we read that

> "all the leading chiefs, including the king, now eagerly applied themselves to learn the arts of reading and writing, and soon began to use them in business correspondence.
>
> Before the end of 1824, two thousand people had learned to read, and a peculiar system of schools was spreading rapidly over the Islands. Each chief sent the most proficient scholars in his retinue to his different lands to act as teachers, with orders to his tenants to attend school. The eagerness of the people to acquire the new and wonderful arts of reading and writing was intense; and at length almost the whole population went to school."[1]

Here was a public-school system established in feudal Hawaii while Pestalozzi was still trying his experiments at Yverdon,—a decade before that educational revival in New England with which the name of Horace Mann is forever linked, and some years before the surveyor, sent to lay out a town-site under the protection of Fort Dearborn, found only a score of inhabitants where now stands the great city of Chicago.

This school system, though crude, was full of life and effectiveness. Many years later, children were sent from San Francisco to Honolulu in order that they might have better educational advantages than those furnished at the city by the Golden Gate; and indeed one governor of California looks back to his *alma mater* at Honolulu. So much of history may serve to point the fact that, educationally, Hawaii is not a pioneer country, but one in which New England brains and New England hands laid deep and wide the foundations of American civilization and culture long before many of the best educational systems of the

[1] ALEXANDER'S "Brief History of the Hawaiian People."

United States were organized, and while those already organized were still crude and unsatisfactory.

The first written constitution and laws of the Hawaiian Islands were promulgated in 1840; and among them was a law providing for a school wherever "parents having fifteen or more children suitable to attend school live close together." From that time to the present, education has held the attention of legislative and executive bodies. And thus the present educational system has grown up. The legislature of 1896 passed an Act amending and consolidating the school laws of the country; and from this Act I quote the following:—

"There shall be an Executive Department to be known as the Department of Public Instruction, which shall consist of a Minister of Public Instruction and six Commissioners. . . .

No person in holy orders or a minister of religion shall be eligible as a Commissioner. Women shall be eligible to be appointed as Commissioners; provided, however, that not more than two shall hold commissions at any one time. . . .

For the purpose of supervision and inspection, the Department shall appoint an Inspector-General of Schools, to hold office during its pleasure; provided, however, that no person in holy orders or a minister of religion shall be eligible to fill such office. . . .

All schools established and maintained by the Department in accordance with law are public schools. All other schools are private schools. . . .

Every private school shall be subject to the supervision of the Department. . . .

There shall be no charge for tuition in any public school; provided, however, that the Department may in its discretion establish, maintain, and discontinue select schools, taught in the English language, at a charge of such tuition fees for attendance as it may deem proper; provided, however, that such select schools shall be established only in places where free schools of the same grade for pupils within the compulsory age are readily accessible to the children of such district. . . .

The attendance of all children between six and fifteen years of age . . . at either a public or private school is obligatory. And it shall be incumbent upon all parents, guardians, and others having the responsibility and care of children of such ages, to send them to some such school. . . .

The English language shall be the medium and basis of instruction in all public and private schools. . . ."

As a rule, every village and hamlet where a dozen children of school age can be assembled has its school open during ten months in each year. The only exceptions are caused by the rapid development of the country; settlements springing up more rapidly than schools can be provided; yet these exceptions are only temporary. The compulsory-education law requires that children between the ages of six and fifteen attend school during the entire school year. In this connection, the following table, taken from the new Census Report, will be found interesting:—

Nationalities.	Number within School Age.	Per cent Attending School.
Hawaiians	5,467	98.39
Part-Hawaiians	2,437	99.01
Hawaiian-born Foreigners	4,505	94.40
Americans [1]	126	86.50
British	72	82.75
Germans	62	82.25
French	1	.....
Norwegians	12	100.00
Portuguese	774	85.40
Japanese	147	94.55
Chinese	665	92.48
South-Sea Islanders	6	.....
Other Nationalities	12	83.33
Total	14,286	96.20

The reason why Americans, British, and Germans do not stand better in this table is that many children of these nationalities are educated by governesses at home till they are seven or eight years of age, or older. The following table shows the corresponding percentage of literacy:—

Nationalities.	Number over Six Years.	Per cent Able to Read and Write.
Hawaiian	26,495	83.97
Part-Hawaiian	5,895	91.21
Hawaiian-born Foreigners	5,394	68.29
Americans [1]	2,060	86.02
British	1,516	95.44
Germans	899	86.31
French	75	92.00
Norwegians	215	80.46
Portuguese	8,089	27.84
Japanese	22,189	53.60
Chinese	19,317	48.47
South-Sea Islanders	407	40.05
Other Nationalities	423	75.41

Hawaiian-born foreigners naturally stand low in this table, because a large percentage of persons so designated are children. From the last Report of the Minister of Public Instruction (not yet published), I am permitted to draw the following facts:—

During the year there has been a gain in school attendance of 11 per cent. Hawaiians of full blood have increased 5 per cent; Part-Hawaiians, 11 per cent,—just the average gain. The gain of Hawaiians

[1] 130 sailors of U. S. S. "Adams" not tabulated.

of both pure and mixed blood has been a little less than 7 per cent. Portuguese (of both foreign and Island birth) have increased 13 per cent. These classes continue to form the bulk of the school attendance; 56½ per cent being of Hawaiian blood (pure or mixed) and 25 per cent being Portuguese, as designated above. The remaining 18½ per cent includes a large number of nationalities.

Teachers are employed by the year, but not for the year. Appointments are made to last during good behavior and satisfactory service. Tenure as a rule is long; and dismissals are few. A considerable number of teachers have taught for fifteen or twenty years under a single appointment, and in some cases in the same school. These teachers, being permanently employed, frequently establish their own homes, and become important citizens in their districts. Residences for them are sometimes furnished at the public expense. All this tends to create personal interest on the part of the teachers in their particular pupils; while, on the other hand, pupils look up to their teachers—who, in some cases, have been the teachers of their parents in the same schools—with a degree of respect which no stranger could command.

As regards the nationalities of teachers, the unpublished Report of the Minister of Public Instruction, above referred to, shows that of a total of 483 teachers, there are 64 Hawaiian; 63 Part-Hawaiian; 226 American; 76 British; 8 German; 5 French; 6 Scandinavian; 13 Portuguese; 12 Chinese; and 10 of other nationalities.

Many of the foreign teachers are men and women of liberal education and good professional preparation. Among them are to be found in considerable numbers graduates of colleges and universities such as Yale, Harvard, Amherst, Wesleyan (Middletown, Conn.), Cornell, and Oberlin, and of Oswego and the California State normal schools.

The influence of such leaders upon the teaching-force is necessarily great, and is now rapidly increasing. Recognizing the value of such leadership, the Minister and Commissioners of Public Instruction have lately instituted a kind of open school of higher pedagogy, to be conducted somewhat after the Chautauquan model; extended sessions to be held during the summer vacation. The courses undertaken in this organization are like those given in the pedagogical departments of the American universities; and only graduates of colleges or State normal schools, and those able to present satisfactory evidence of like qualification for the work are admitted to the classes.

Reading circles have been established on all the principal islands; and, under the leadership of the better educated teachers, they are do-

ing much to raise the standard of the whole force. Thus far, the books studied in these circles have been wholly professional in character; but it is intended that the scope of the work shall be widened in the future, so as to inculcate a broader culture.

In 1896, a Summer School for Teachers was established; and it has now held two very successful sessions. A large number of elective courses was offered to the teachers, nearly all being given by instructors chosen from the Island teaching-force. In 1896, Dr. F. B. Dresslar, and in 1897, Dr. E. E. Brown—both now of the California State University—gave courses of lectures in the Summer School. The attendance at each of these sessions included nearly one-half of the teachers of both public and private schools; thus testifying eloquently and forcibly to the zeal of the Island teachers. All this work is carried on by the teachers voluntarily and, for the most part, at their own expense.

A Normal and Training School has been organized, and is attended by nearly fifty students. Though not yet fully equipped, it is doing very valuable work. It takes the product of the common schools and makes it a teaching-force for these common schools themselves.

It is the chief work of the Honolulu Normal School to prepare teachers to teach the children of their own people. Thus, the tendency is to reduce the number of foreign teachers; although it is to be hoped that the day is far distant when Hawaii will cease to draw a part of her teaching-force from more favored localities.

It is noteworthy that the English language is practically the only language used as a means of communication or instruction in the Hawaiian schools; yet English is the mother-tongue of but five per cent of the pupils. Whenever the language of the school is not the language of the home, education is at a disadvantage. In fact, instruction under these conditions is well-nigh an unsolved problem. The children of Hawaii, like those of Poland, are now suffering from this disadvantage. It is probable that the native Hawaiians do less intelligent reading now than they did a few years ago, when their own language was the language of the schools. But conditions are rapidly changing. The English language is coming into use as a means of communication among the graduates of the public schools, many of whom have no other language in common. Thus, it is creeping into the homes of the people. When children learn even crude English from their mothers, the task of the teacher will be much simplified.

It is not strange that under existing circumstances the schools of Hawaii are nearly all primary in character, and that the percentage of

those entering even upon secondary education is very small. Industrial education was popular in Hawaii long before it became so in America; and the problem of introducing more of it into the common schools is one of the living educational issues. The Kamehameha Schools (founded and endowed by "the last of the Kamehamehas," the Princess Pauahi, wife of Hon. C. R. Bishop, now of San Francisco) are devoted conspicuously to manual training and industrial education. These schools, be it said in passing, have an endowment and equipment sufficient to render famous any city in America of the size of Honolulu, similarly endowed. And they have a teaching-force worthy of the opportunities they offer.

For many years, there have been schools at Honolulu and Hilo especially adapted to the needs of children of English-speaking parents. Lately, similar schools have been established in other localities; and still others will be opened shortly. It is from these schools that most of the students entering upon secondary and higher education come. A regular public high-school is in process of organization at Honolulu; the greater number of departments being already in working order. The endowed institution known as Oahu College has long offered full preparation for any college in America; and many of its graduates have entered leading American colleges on an advanced standing.

Expenditures for the public schools of Hawaii for the current biennial period are at the rate of $2.17 per capita of population per annum, as against $2.47 in the United States at the date of the last available statistics. Yet these expenditures in Hawaii amount to $23.36 per capita of school attendance, as against $18.45 in the United States. This apparent paradox is explained by the abnormally small percentage of children in the population of Hawaii. And Hawaii pays for tuition $17.20 per capita of attendance, as against $11.76 in the United States. In Hawaii, 73 per cent of the total cost of the public schools is paid for tuition: in the United States, 64 per cent only.

The mild climate of Hawaii accounts, in large measure, for the small expenditures required apart from teachers' salaries. Public-school buildings are unpretentious, with a single exception. The private schools have more money spent on them by their conductors. The result is that Honolulu can boast of two buildings as fine as any to be found elsewhere.

Creditable public libraries in Honolulu and Hilo, and similar institutions growing up in other localities, attest the culture of the residents, and, at the same time, serve as means of most valuable education. The absence of telegraphic communication, even among the islands, serves

to cultivate a taste for the deliberate in reading. The Bernice Pauahi Bishop Museum of Polynesian Ethnology and Natural History is the best institution of its kind in the world; and in itself is enough to make Honolulu notable among Polynesian students and scholars. Here are to be seen, magnificently housed in a massive basaltic-stone building, the best collections in the several branches from various localities in Polynesia and Australasia. The Museum, which is richly endowed, is kept up to date by the able curator, Prof. W. T. Brigham, formerly of Harvard. The University Association of Honolulu, consisting of graduates of colleges and universities of good standing, has a membership of fifty-five. Every member claims some American college or university as his *alma mater*, though some have taken degrees in European universities also. "Honors are easy" among Harvard, Yale, Williams, and Amherst. Wesleyan, Cornell, Michigan, and other institutions of similar standing are perhaps as well, though not so numerously, represented. Among Honolulu women are to be found numerous highly educated persons, and a considerable number of regular college graduates. Nor is culture confined to the capital city. College graduates are to be found on all the principal islands and in all the most important districts.

From what has been said, it will be understood that Hawaii has her peculiar educational problems; and they are very difficult. Many races and nationalities are included in her population; and the representatives are not always creditable to those represented. This population is rapidly increasing by accretions from without, as well as by natural growth. The children, as they appear in school, are indeed a heterogeneous mass. The heterogeneous must be made homogeneous, if peace and harmony are to prevail in the land. All these nationalities and races are to be moulded into one people. And this resulting people is to be a people of higher moral tone than the elements of which it will be necessarily composed.

Community of language is an essential step in this process. But educative instruction—that which leads to better thinking, better willing, and better living—must not be sacrificed in any degree even to so desirable an end as community of language. Hawaii has not solved her educational problems; but she is facing them intelligently, bravely, and hopefully.

HENRY SCHULER TOWNSEND.

AMERICAN EXCAVATIONS IN GREECE: SPARTA AND CORINTH.

WHAT remains to be told of the work of the American archæologists in Greece is of exceptional interest, although the results of the excavations have not been so prolific as the field of exploration promised.

During the first season (1892) at the Heræum, Dr. Waldstein visited the battlefield of Œnoë, in the plain of Argolis, and noticed, near the village of Koutzopodi, a large mound, which, he surmised, covered ancient ruins. In the following year, on April 20, he dug on this site also, confiding the work to the foreman. After the fourth day, however, Mr. J. M. Paton took charge of the excavation, which lasted but a few days altogether. Foundation-walls, forming an irregular parallelogram about 62 metres long and from 12 to 20 wide, were traced; but no elucidation of the nature or purpose of the structure was forthcoming, beyond Mr. Paton's conjecture that it might be "a building in connection with some extensive fountain or waterworks." At the same time, considerable Byzantine and other remains were met with. Yet the work was interrupted; Dr. Waldstein remarking that, "to arrive at more definite results, much more extensive operations would have to be begun. Considering the work we have before us at the Heræum, it would not be worth our while to do this for the present." It has not been done since.

Similar attempts made in Laconia were not much more effectual. This is the more to be regretted, since few sites present an interest so absorbing as that of Sparta. Apart from its transcendent historical importance, there is every reason to believe that it still conceals valuable remains. A contrary opinion is founded on what is clearly an erroneous interpretation of the famous passage in Thucydides (i. 10. 2) in which the great historian compares the two rival cities, Athens and Sparta, and prophetically speculates as to the future:—

"If the city of the Lacedæmonians were destroyed, and only its sanctuaries and the foundations of its structures were left, I think that among men of a distant age there would be much disbelief in its [former] power, notwithstanding its glorious records and the fact that it possessed two-fifths of the Peloponnesus and that its hegemony extended over the whole peninsula and many allies beyond.

For the city, not having been built in contiguity, nor having been lavish in splendid sanctuaries and structures, but having been inhabited in separate settlements according to the ancient custom of the Greeks, would appear inferior to its fame; whereas, if Athens were likewise destroyed, it would be imagined, from the apparent aspect of the city, that its power had been twice as great as it was actually."

A careful study of this passage shows, I think, that Thucydides speaks not of an absolute, but of a relative, paucity of public monuments in Sparta, as compared with her own great power on the one hand, and with the incomparable splendor of Athens on the other. To say, therefore, that, "notwithstanding the well-known passage in Thucydides, ancient Sparta possessed many magnificent buildings," is to misconceive entirely what Thucydides does say. Moreover, Pausanias has left us a very copious list of the public edifices of Sparta, notably the "Persian Stoa,"—erected out of the Persian spoils, and adorned with many statues,—and the temple of the titular goddess of the city, Athena Chalcioecus, built by the famous architect, statuary, and poet, Gitiadas, who overlaid its walls with plates of bronze.

Unfortunately the description of Pausanias, though characterized by his usual precision, is in a way vague and embarrassing, owing to the fact that actually there exists above ground hardly any vestige that can serve as a starting-point in following the route through the city taken by Pausanias. Only the theatre and a square building, popularly known as the "Tomb of Leonidas" (*Leonidaion*), remain unobliterated, and therefore the topographical plans of Sparta drawn up by successive archæologists and travellers are only supposititious and mutually contradictory. The first special and more or less complete treatise on the subject, Prof. H. K. Stein's "Topographie des Alten Sparta" (1890), was followed, two years later, by a remarkable little work of a countryman of mine, Mr. C. Nestorides, who, having long resided in the district as professor at the local gymnasium, enjoyed exceptional advantages in this respect. Finally, in January, 1893, Mr. N. E. Crosby, a student of the American School at Athens, having specially visited the place for the purpose, published in the "American Journal of Archæology" (viii. 335–373) a very able paper on "The Topography of Sparta."

It will suffice to give here but a few data bearing upon the subject. Sparta was built on the right bank of the Eurotas, on a succession of low hills rising out of a small valley of rare beauty and great fertility, which is shut in by the mountain ranges of Taygetus and Parnon. The city was thus easily defensible, and was partially fortified only in 296 B.C.

It was not till 195 B.C., under the Tyrant Nabis, that Sparta was surrounded with walls. Later on, these fortifications were razed by the Achæan League; consequently, the walls of which Pausanias speaks must have been of Roman construction. No vestige of these is visible; but we know, from Polybius, that they were forty-eight stadia (about five and one-half miles) in circumference, and of a somewhat circular shape. The city was taken in A.D. 396 by Alaric, when he overran the Peloponnesus. Under the Byzantines, Sparta was known as Lacedæmon; and when the peninsula was conquered by the Franks in 1248–49, Guillaume II de Villehardouin established the dukedom of Sparta, and built a fortress about two miles to the west, at the foot of Mount Taygetus, on a hill called Mizithra. The inhabitants of the town, which was gradually confined to the height near the theatre, now abandoned it, and sought protection under the new fortress. Thus was formed a new town known by the contracted form of Mistra. After the establishment of the kingdom, New Sparta was built (in 1834) partly on the ancient site. In its immediate vicinity, considerable vestiges of a Roman amphitheatre are to be seen, as well as very important remains of Byzantine ecclesiastic architecture.

But, as the city of Sparta was never destroyed in ancient times, it has always been confidently hoped that very material discoveries would be made on its site, notwithstanding the probability that during the Middle Ages much of the old material was used up. This expectation was confirmed by the somewhat cursory investigations of the French "Expedition Scientifique de Morée," in 1820, by Schliemann's researches,—when he also excavated Vafio,—and by the discovery, in the spring of 1889, of a polygonal mosaic floor adorned with portraits and inscriptions. Moreover, the local museum at Sparta contains a very considerable collection of antiquities from the site itself and the vicinity. Indeed, Dr. Waldstein's first inspection led him to write: "From the nature of the soil, as well as from the indications of what has already been found there, I am bound to consider Sparta one of the most hopeful sites in Greece." Consequently, in January, 1892, he obtained from the Greek government a concession (the text of which will be found in the "American Journal of Archæology," vii. 515), by virtue of which the American School undertook to carry on excavations in Sparta and Amyclæ for seven years. In the spring of 1892, the School had already on its hands the incomplete exploration of Sicyon and Eretria, and had just entered upon the even more responsible work of the Heræum. Nevertheless, in the middle of March,

Dr. Waldstein commenced operations also at Sparta. He was allowed to excavate, not only on government lands, but to dig trial trenches on any private property without compensation,—so ready are the people of Greece to facilitate archæological research. He first dug on the Leonidaion, which he concluded was a small temple *in antis*. In other parts of the site, between thirty and forty trenches were sunk: but nothing of consequence was unearthed; and attempts to fix the locality of the *agora*, the most important centre in the ancient city, were equally disappointing. Therefore, it is stated, "the result was to prove that ancient Sparta was ruined, not only by Mistra on the hill, but by the mediæval Lacedæmon." A final attempt, however, promised better results. Prof. Nestorides had already pointed out a small tumulus, a little to the north of the supposed *agora*, as the probable site of the "circular building," which Pausanias says was erected about 576 B.C. on the advice of Epimenides of Crete, the famous hieratic poet and sage: it was adorned with statues of Zeus and Aphrodite. Here Dr. Waldstein dug. On the summit of the mound, he soon came upon a very large base for a statue, near which he discovered the thumb of a colossal marble statue, apparently holding a sceptre. These data and some foundations of an edifice satisfied Dr. Waldstein that this was the "circular building" of Epimenides.

Only a small part of this structure was unearthed, when Dr. Waldstein proceeded thence to Amyclæ. This small town, the home of Castor and Pollux and of Tyndarus, was one of the most noted centres in the Peloponnesus during the heroic age ("Iliad," ii. 584) and maintained its independence of Sparta up to a comparatively late time. The hill of Hagia Kyriakè, about two and a half miles to the south of Sparta, was first suggested by Leake as the probable locality of Amyclæ; and the desirability of exploring the place and seeking some traces of the famous sanctuary of Apollo the Amyclæan was long recognized. Consequently, the learned Greek archæologist, Dr. Tsountas, carried out, in the autumn of 1891, some excavations the important and decisive results of which were known to those interested in such matters, having been published in the Greek archæological "Ephimeris" of January, 1892. The only account of Dr. Waldstein's subsequent operations that has yet been published is, so far as I have been able to ascertain, the following: "I conducted excavations also on the site of Amyclæ, but found that Tsountas had already laid bare all of promise there."

The exploration of the "circular building" having meanwhile been left unfinished, Dr. Waldstein, accompanied by Mr. C. L. Meader, re-

turned to Sparta on April 15, 1893, and continued the work till the twenty-fifth of that month. Even then the structure was not absolutely cleared of earth. Vestiges of a Byzantine church were met with; and almost all the small objects found were Roman or Byzantine. The structural remains laid bare inclined Mr. Meader to believe that there was here "an ancient tumulus or grave, or an heroic place of interment." But Dr. Waldstein held to his original opinion, which, if substantiated, would, no doubt, prove a very material contribution to the topography of Sparta. Mr. Crosby, however, who had made a special study of the subject, declares: "The identification of this ruin with the circular building attributed to Epimenides, I consider a great mistake." And again, writing to the "American Journal of Archæology" (ix. 212), he adduces evidence from Mr. Meader's own report, showing that the foundations unearthed were merely the retaining-walls of a mound which supported the base of the colossal statue of Demos described by Pausanias (iii. 11. 9). Mr. Crosby also took exception to the supposition that the Leonidaion was a temple *in antis*. To these exceptions Dr. Waldstein replied: "Mr. Crosby's strictures are without any ground. There can be no controversy with him on these points." He also states that he has good reasons for supposing the Leonidaion to be a temple; and there the matter—as well as the further exploration of Sparta—for the present stands.

About half-way between Argos and Sicyon, in a direct line, lies a small valley 890 feet above the level of the sea, ensconced between high mountains and watered by the Asopus. It formed the independent territory of Phliasia, the sturdy Dorian settlers of which, considered it the *omphalos*—the centre of the Peloponnesus. The gallant little town of Phlius contributed contingents of two hundred men at Thermopylæ and a thousand at Plataia, and was celebrated as the birthplace of Pratinas, the inventor of the satyrical drama and a competitor with Æschylus for the prize at Athens. Pausanias (ii. 13) gives an account of the monuments of Phlius, the exact locality of which is placed by L. Ross ("Reisen in Peloponn.," p. 25) on the right bank of the Asopus, where considerable remains are to be seen not far off, by the church of Our Lady of the Hillside—most probably the site of the ancient temple of Demeter. Before Ross, this interesting valley had been visited and described by Leake in 1807; and it was here that Mr. H. S. Washington, accompanied by his brother, Mr. C. M. Washington, undertook at his own cost excavations in the early part of March, 1892. The results of this exploration do not seem to be important; but a full report of them has not yet appeared.

The latest exploration undertaken by the American Scholars bids fair to eclipse all their previous achievements in Greece. Not only is the vast site of ancient Corinth of exceptional interest and of great archæological promise, but the work is fortunately in the hands of Prof. Richardson, the present Director of the School, who, as shown more than once in these articles, has given proof of sound scholarship and of that scrupulousness in research which is an essential in all scientific work.

Little need be said here of the ancient glories of Corinth, whose very name conjures up visions of magnificence and memories of artistic refinement. The spot itself, on which the great city stood, had in it the germs of prosperity and opulence; and commercial supremacy was by nature the portion of a community planted astride the isthmus which joins the Peloponnesus with continental Greece, between the two great highways of ancient commerce,—the Ægean, with all the trade of Asia Minor, Pontus, and Egypt, to the east, and the Ionian Sea, with the colonies of Magna Græcia, Sicily, and the Pillars of Hercules to the west. Corinth was thus the port of transit of the then known world; for the navigation round Cape Malea, to the south of the Peloponnesus, was deemed in antiquity proverbially perilous.

In such conditions the city rose rapidly in power and importance; sending forth numerous colonies, and amassing greater riches than any other town in Greece. Sumptuous temples and public edifices were erected; Corinthian architecture culminating here in the most ornate and elaborate of the three Greek orders. The art of the statuary and the painter also flourished here with extraordinary luxuriance; and the exquisite Corinthian fictile vases became as famous as the metal work which earned for Corinthian bronze (*Æs corinthiacus*) a world-wide fame. Poetry of the softer sort—the *Μοῦσ' ἀδύπνοος*, of which Pindar speaks in his thirteenth Olympian Ode in honor of the great Corinthian athlete, Xenophon—was cultivated at Corinth, but not the sterner kinds of literature. For the immense wealth centred in the great emporium, and the lax morals of traders from the East and the West engendered luxury and license. Aphrodite was the patron goddess of the city; and around her magnificent temple on the Acrocorinthus a thousand *hierodouli*, or female slaves, were lodged.

At the height of its prosperity, Corinth comprised some 70,000 inhabitants, besides 30,000 established in the surrounding territory; being then, in size and magnificence, second only to Athens. Though a great commercial centre, Corinth, like Athens, stood inland; and Lechæon,

its port, a mile and a half to the north, was joined to it by long walls which, extending southward, beyond the city, to the east and west slopes of the Acrocorinthus, formed a total circuit of twelve miles, inclusive of the suburbs. The most famous of these was Kraneion, where Diogenes was visited by Alexander the Great.

Such was Corinth in greatness and splendor, when Lucius Mummius, on the pretext that the ambassadors who brought the ultimatum of the Roman Senate to the Achæan League had been insulted,—though the city offered no resistance to him,—perpetrated, 146 B.C., one of the greatest barbarities of which even a Roman consul was capable. The males of the population were put to the sword; women and children were sold as slaves; and the beautiful city, after being sacked by the soldiery, was burned to the ground. The commercial interest of Rome demanded its effacement; and with its last dying flame was extinguished the "lumen totius Græciæ," as Cicero spoke of Corinth. The Isthmian sanctuary over which the Corinthians presided was entrusted to Sicyon; but the site of the city was not allowed to be inhabited. For a whole century it lay desolate, when, in 46 B.C., Julius Cæsar rebuilt the city, which was renamed Colonia Julia Corinthus, and colonized it with his veterans and some freedmen. The old prosperity soon returned to its favored abode. Corinth now became the capital city of Achaia; and when St. Paul sojourned and labored there, a century later, it was one of the chief centres of the new faith. Another century elapsed before Pausanias visited Corinth. In describing it he says (ii. 2. 6) that "of the noteworthy things in the city, some are those which still remain of ancient times; but the greater part were executed in the flourishing period afterward."

Indeed the artistic riches of Corinth must have been well-nigh inexhaustible. Shiploads of statues and other works of art had been sent to Rome; Mummius showing his appreciation of their worth by warning the masters of vessels that if any statue were lost or injured he would compel them to replace it by a new one. And Polybius, who was an eye-witness of the pillage, relates that the Roman soldiers played dice on one of the most famous paintings of Aristides, a contemporary of Apelles, for which Attalus, King of Pergamus, subsequently offered 600,000 sesterces,—equal to $25,000. Cæsar's colonists, again, left but few graves unransacked (Strabo, viii. 381) in their search for the beautiful Corinthian vases, which they sold in Rome at fabulous prices. Yet, where the harvest was so rich, it is confidently hoped that much still awaits the patient gleaner.

The ancient city was built on two successive terraces at the foot of the Acrocorinthus, the precipitous and commanding Acropolis, which rises abruptly from the plain to a height of 1,886 feet above the sea-level. It is now crowned by a mediæval fort and a vast accumulation of remains; recording its eventful history from remote antiquity to this day. It was at all times considered one of the keys of Greece, and, if adequately fortified, could rival Gibraltar itself as a stronghold. The ancient oracle spoke of it as one of the two horns by which the coveted heifer, the Peloponnesus, could be mastered. Indeed, it has never been captured, except by treachery or surrender.

No language can picture the view from the summit of the Acrocorinthus, the surpassing grandeur of which was extolled by the ancients themselves. It embraces, as Leake says, "a greater number of celebrated objects than any other in Greece." The high mountains that shut in Argolis to the south join with the Arcadian range that abuts on the plain of Sicyon to the west, and, merged in the view with the mountains of Ætolia, Locris, Phocis, and Bœotia toward the north, enclose the blue waters of the Gulf of Corinth as of a serene inland lake; Parnassus rearing its snow-clad cap above them all. At the spectator's feet the Isthmus spreads out like a map; and beyond extends the Ægean, with its innumerable isles, and the Saronic gulf, with Ægina and Salamis. Farther still, to the northeast, at a distance of more than fifty miles, Cape Sunium is seen to merge into the Hymettus and Pentelicus range, encircling the plain of Athens in a ring of purple, with the immortal rock of the Acropolis rising up in its centre. Never shall I forget how, after journeying by early dawn up the rugged slope of the Acrocorinthus, I reached the summit just as the first rays of the rising sun fell upon the Parthenon and, lighting up its marble columns, made it sparkle like a huge diamond set in massive gold. The Acrocorinthus was said to be the domain of Helios, the sun, who won it in a contest with Poseidon; the Isthmus being awarded to the god of the seas.

Corinth and its fortress fell into the hands of the Turks in 1458; were taken by the Venetians in 1687; and were recovered by the Turks in 1715. The stronghold was finally won back by the Greeks in 1823. One of the most destructive of the earthquakes which often devastate parts of the Morea reduced the modern town to ruins in 1858, when a "New Corinth" was built by the sea, three and a half miles to the northeast of the old site, which was then abandoned definitely—and one may add, fortunately, in the interest of archæological research. It is now mostly under cultivation. A few vestiges of the old walls and the

unimportant remains of a Roman amphitheatre are still noticeable above ground; and, at a short distance, a rock, with several niches and artificial channels, from which water springs abundantly, is known as the Bath of Aphrodite. But the most conspicuous objects from a distance are the seven Doric columns, still supporting portions of the entablature, and marking the site of a temple, the identity of which has not yet been ascertained. But the style and the proportions of these huge monoliths, 23½ feet in height and 5½ feet in diameter at the base, speak of the great antiquity of this temple, which must have resisted Roman fury and have served as a sanctuary to the new city. A hundred years ago, twelve of its columns were still standing; and the destruction of the temple itself must have taken place at a comparatively recent date.

These details will give a general idea of the aspect of the site to be explored. The visible remains were scanty; but as successive layers of soil, washed down the slopes of the Acrocorinthus, had overlaid the ancient level with a shroud of earth from five to twenty-five feet in depth, there could be but little doubt that much still remained to be revealed to view. The topography however of the ancient city was a complete blank; for, in spite of Pausanias's description, no landmark was available as a starting-point. In 1892, the Greek government made an attempt to discover the *agora;* but the excavations then carried out under Dr. Skias failed in this respect, though they brought to light the well-preserved floor and stylobate of a dwelling-house of the best Greek period. Resting on this were found the remains of a Byzantine building. The inference naturally followed that the substructures of at least a large proportion of the buildings of Old Corinth must have been thus preserved.

Guided by such indications, the Director of the American School secured from the Greek government in December, 1895, the privilege of exploring this coveted site; and operations were begun on March 23, 1896. Rainy weather and the celebration of the Olympian Games interrupted the work during the first half of April. After that date, however, it was vigorously pushed forward with a force of about a hundred men up to June 8, under the personal direction of Prof. R. B. Richardson, aided by Messrs. E. P. Andrews, F. C. Babbitt, H. F. De Cou, T. W. Heermance, and G. D. Lord. Some difficulty was caused by the growing crops on portions of the land; and the expropriation of private tenures is still the main obstacle to the vigorous prosecution of the undertaking.

In default of any fixed point, save the columns of the temple, Prof.

Richardson decided to dig trenches in its vicinity and in other promising spots, in the hope of alighting upon one of the buildings mentioned by Pausanias; otherwise it was groping in the dark. Altogether twenty-one such trenches were sunk, most of them with lateral openings, and all about three metres wide and from four to seven deep. The first trench, though it supplied no certain indication, revealed thirty-one Ionic columns and parts of columns used as foundations for later buildings. In the second trench, thirteen rock-cut graves were found, with a considerable quantity of common red ware. The third trench was more encouraging in its results, since it laid bare a broad paved way of fine workmanship, with water-channels on either side of it—evidently one of the streets of the ancient city, leading, as is conjectured from traces met with in other trenches, to the *agora*. The most important discovery, however, and the one which decided the value of the exploration, was made toward the end of the season, when, on May 19, after a whole week's fruitless digging in trench No. 18, a succession of stones appeared arranged step-wise. On the trench being laterally extended, these proved to be the remains of the theatre. Five flights of steps, innumerable seat-foundations, and two seats *in situ* left no doubt as to the significance of the discovery. These remains are much shattered and damaged; and the steps, in some cases, are deeply worn by footprints. The interest of this fortunate find was heightened when it became evident that a later Roman theatre had been built on the remains of the old structure. A reliable starting-point was thus established; and from its position, relatively to the seven Doric columns, Prof. Richardson supposes the latter to be the Temple of Apollo. Beyond this temple, to the east, another trench brought to light a magnificent *stoa*, or passage, which also is believed to lead to the *agora*—the great centre of the city and of its chief edifices.

The minor finds of this season's work comprise a considerable number of sculptured fragments, four heads of statues, and a Dionysiac group in marble, about half life-size, representing Dionysus between Pan and a nymph. Some inscriptions, mostly Roman, four of them being practically entire; a large quantity of terra-cotta fragments and nineteen whole vases, found in a cluster of prehistoric tombs,—which in themselves are of great archæological interest,—complete the list.

The exploration, thus far, may be said to have been tentative. Nevertheless, it has already furnished indications of very great promise. Prof. Richardson writes: "I have repeatedly said to myself and others, in answer to the question, what form of success I would choose

for this year, 'To find the theatre.'" Archæological research is seldom rewarded in a more ready or satisfactory manner. The guiding end of the thread is now held; and it is in trustworthy hands. Nothing is wanting but the material means to follow it up; unravelling important secrets, revealing long-hidden treasures, and conferring enviable distinction on the explorers. The complete, thorough, and systematic excavations of Corinth will be an achievement surpassing even that of Olympia in point of historic interest, archæological and artistic importance, and in the number and value of the finds that may be reasonably expected from it. Brilliant as the work of the young American School has been thus far, an opportunity for even greater distinction now lies before it at Corinth. Prof. B. I. Wheeler thinks it will be "altogether the most important contribution made by any American excavation to archæological and topographical knowledge."

We have seen, in the course of these articles, what devotion, zeal, and enthusiasm have animated the young American Scholars engaged in the exploration of sites the most hallowed and most celebrated in the world. Many of the students, who had spared no personal labor, were led, by the noble spirit which such occupation engenders, to contribute, out of their more or less limited resources, toward the prosecution of the work. The people of Greece cheerfully give it every facility; while the Greek government is again ready, in the case of Corinth, as Prof. Richardson affirms, "to buy for us just as much or just as little land as we desire; paying a percentage of the price." But much is needed beyond this. To lay bare the entire site—not in a hap-hazard manner, incompatible with the requirements of science, and injurious to the repute of the workers—several seasons of labor will be necessary, and a large sum of money required.

Which American Crœsus will earn for himself a fame more enviable than that of the Crœsus of old, by supplying the necessary funds for a work noble in itself and promising him lasting renown? The erection of no institution, the endowment of no foundation at home, can compare in object and result with this exploration of Corinth by the American School at Athens. It will be a service rendered to every branch of science; it will be an achievement known to and discussed by the whole world; it will be the resuscitation of the "lumen totius Græciæ." The name of the Mæcenas who confers this benefit on science and civilization will ever remain connected with the imperishable fame of Corinth; while his munificence will add to the honor and prestige of America.

J. GENNADIUS.

THE RELATION OF THE DRAMA TO LITERATURE.

THE invention of printing and the extension of education have given immense influence to the art of writing; and hence has come about a tendency to judge the other arts by the principles that govern literature. Rarely do we find a man of letters who is not ready with his opinion of the picture in the gallery, of the statue in the square, or of the play in the theatre; and frequently his criticism is purely literary, being supported by no special study of any other art than literature, and being sustained by no familiarity with the principles of painting, of sculpture, or of the drama. Generally, the man of letters is lacking in appreciation of the individuality of each of these several arts, of the essential qualities of each, peculiar to it alone, and therefore most relished by those who can recognize this. In a picture, the man of letters sees chiefly the story, the sentiment, the thought: he has little desire and little knowledge to weigh the merits of technic, by which alone the various arts are differentiated, one from the other.

The painters have long protested against any judgment of their work in accordance with the principles of another art; and at last they have succeeded in convincing the more open-minded of us that what is of prime importance in a picture is the way in which it is painted, and that its merely literary merit is quite secondary. They are not unreasonable when they insist that the chief duty of a picture is to represent the visible world, not to point a moral or adorn a tale, and that in the appreciation of a picture we must weigh first of all its pictorial beauty. Nor are the sculptors asking too much, when in a statue they want us to consider chiefly its plastic beauty.

Now, the orator and the dramatist ask for themselves what has been granted the painter and the sculptor: they request that an oration or a drama shall be judged not as literature only, but also in accordance with the principles of its own art. And here the literary critic is even less willing to yield. He may acknowledge his own ignorance of perspective and of pigments, of composition and of modelling; he may confess that here the painter and the sculptor have him at a disadvantage; but he is not ready to admit that he is not to apply his own standards to the

works of the orator and of the dramatist. On the contrary, he maintains that the speech and the play, if they belong to literature at all, are, by that very fact, absolutely within the province of the literary critic. He cannot see why that which the orator and the dramatist may write is not to be read and criticised exactly as that which is written by the novelist and the essayist and the poet. Indeed, it is almost a misrepresentation of the literary critic's attitude to suggest that he has need to maintain this position; for it is rarely even hinted to him that he is not fully justified in employing the same tests in every department of literature.

Yet nothing ought to be clearer than the distinction between the written word and the spoken,—between the literature which is addressed to the eye alone and that which is intended primarily for the ear and only secondarily for the eye. It is the difference between words written once for all and words first spoken and then written,—or at least written so that they may be spoken. When this distinction is seized, it follows that oral discourse is not necessarily to be measured on the same scale as written discourse. It follows also that the speech and the play may be very good indeed, each in its kind, although they may fail to attain the standard of strictly literary merit which we should demand in an essay, a story, or a poem.

"Much of the ancient criticism of oratory," says Prof. Jebb, "is tainted by a radical vice. The ancient critics too often confound literary merit with oratorical merit. They judge too much from the standpoint of the reader, and too little from the standpoint of the hearer." For a just estimate of the rank of a speaker, "the first thing necessary," the same authority continues, "is an effort of imaginative sympathy. We must not merely analyze his style; we must try to realize the effect which some one of his speeches, as a whole, would have made on a given audience in given circumstances." It is this effort of imaginative sympathy which Schérer refused to make, when he sought to show that Molière often wrote bad French. Looking at some of the scenes of the great comic dramatist from a purely literary standpoint, the critic found many faults; but these blemishes to the eye, when the words were read in the study, were, many of them, beauties to the ear, when the words were spoken on the stage.

The dramatist and the orator are bound by many of the same conditions; and one of these is inexorable: Each of them must please his immediate audience. The poet can appeal to posterity; but if the orator does not hold the attention of those whom he is addressing, his speech

is a failure then and there, no matter how highly posterity may esteem it. The sermon accomplishes its purpose adequately, if it moves the congregation that listens to it; and so does a comedy, if it amuses the spectators that see it. If a speaker holds his hearers in the hollow of his hand while he is talking to them, and if he makes them thrill and throb with his words, then he has done what he set out to do, even if his words, when reproduced in cold type, fail absolutely to explain his success.

To affect his hearers is the first duty of the orator: to move his readers follows a long way after. That an oration should produce the same effect on both hearer and reader, is almost impossible: so competent a critic as Fox declared it to be quite impossible. When a certain speech was praised to him, he asked, "Does it read well?—because, be sure, if it does, it is a very bad speech." This is a hard saying. Indeed we need not hesitate to call it an overstatement, if we let our memory dwell on the oration of Demosthenes on the Crown, on Cicero's denunciation of Catiline, on Webster's reply to Hayne, and on Lincoln's Gettysburg address. But, like other overstatements, it may serve a useful purpose in putting into strong relief a side of the case which few of us see clearly. Lacordaire, a critic of eloquence as competent as Fox, is in substantial agreement with the latter. "The orator and the audience are two brothers," he declares, "who are born and who die the same day."

Perhaps cleverness is the final adjective to characterize Cicero; and certainly nothing could be cleverer than the skill with which the Roman rhetorician was able to meet the double demand on the orator,—if we may accept the suggestion of the late M. Goumy. The French critic maintained that the circumstances of the political situation in Rome made it physically impossible that Cicero could have delivered the diatribes against Catiline as they are preserved to us. They are too ornate to have been extemporized in the brief snatches of time at Cicero's command; and they are too long to have been endured by the impatient senate, restless at the crisis in the affairs of the republic. As the officer of state charged with the duty of discovering and putting down a conspiracy, Cicero no doubt made speeches to the senate; but what he actually said then—excellent as it was for its immediate purpose—can have been but a hasty outline of the successive orations as we have them now. Cicero was a born orator and a most accomplished master of the craft. No doubt the offhand speeches in which he reported the result of his detective work, and in which he solemnly set forth the awful dangers menacing the commonwealth,—no doubt, these speeches were vigorous

and adroit, and aroused to enthusiasm those who heard them delivered by the impassioned consul. But, as soon as he had leisure, Cicero began to polish what he had said; and he did not leave it till he had made it what he would like to have said; thus combining the advantages of the impromptu with those of sober second thought,—the wit of the staircase, as the French call it.

As we are in the habit of recalling only the orations which are endowed with remarkable literary merit, we are naturally inclined to attribute to this literary merit their effectiveness when spoken, instead of seeking beneath the mere literature for the purely oratorical qualities which alone can account for their original success. To this day, we read with delight what Demosthenes said in Athens, what Cicero said in Rome, what Webster said in the Capitol, and what Lincoln said on the field of battle; but the Greek orator and the Roman and the two Americans were none of them thinking of us when they stood up to speak. Each of them was thinking of the men to whom he was speaking at that moment: he was addressing himself to those who were actually within sound of his voice and who were to be moved to action by the words he was about to speak. If he should accomplish his immediate purpose he would be amply satisfied; and if his sentences should also reverberate through time,—this would be but a surplusage of reward. The primary appeal was to those who were listening then; and the appeal to those who may read now is secondary and quite subsidiary.

To set up the immediate effect of the oration upon the audience as the chief test of the orator may, to some, seem narrow. But, in so far as a man comes forward as a speaker, it is surely not unfair to judge him as a speaker. And the first duty of an orator is to hold the attention of those he is addressing,—or else why take the trouble of speaking at all? Why not ask leave to print and be done with it? Why go through the empty form of appealing to the ear, when the real intention is to appeal to the eye?

Some of the finest orations of Isocrates were apparently never delivered,—they seem, indeed, although strictly oratorical in form, to have been intended from the first to be read rather than recited; and when we remember how important a part in the development of Greek prose had been played by Greek oratory, we may even question whether Isocrates is fairly to be reckoned among the orators. But some of the finest orations of Burke might as well not have been spoken, for all the good their delivery accomplished. Burke's speeches are an inexhaustible storehouse of political wisdom from which succeeding generations will

continue to help themselves. But, if we apply the test of immediate effectiveness upon the audience addressed, we are compelled to deny to Burke the rank of a great orator. It is not a question of the matter of his speech: it is a question of the manner of the speaker.

It is quite inconceivable that a great orator should put to flight those whom he wished to bring over to his way of thinking; yet this is what Burke did, not once only, but often. When he arose to address the Commons, the House emptied itself. He might "wind into his subject like a serpent"; but his fellow-members fled swiftly, to escape the fate of Laocoön. He was called the "dinner-bell"; and his friend Goldsmith has recorded that he

> "still went on refining,
> And thought of convincing while they thought of dining."

Mr. John Morley judges that perhaps the greatest speech Burke ever made was that on conciliation with America,—

> "the wisest in its temper, the most closely logical in its reasoning, the amplest in appropriate topics, the most generous and conciliatory in the substance of its appeals. Yet Erskine, who was in the House when this was delivered, said that it drove everybody away, including people who, when they came to read it, read it over and over again, and could hardly think of anything else."

In other words, Burke's greatest speech has the same merits as his "Letter to the Electors of Bristol"; and, for all the effect it produced, it might as well have been printed with no attempt at delivery. And here the kinship of Isocrates becomes evident; however superior the Irishman might be to the Greek in splendor and amplitude and penetration, they both of them lacked the first requisite of the orator. This condition precedent to triumph was possessed abundantly by Demosthenes and by Cicero, by Bossuet and by Webster,—men with whom it is not unfair to compare Burke.

It has been possessed also by many men of far inferior powers, lacking all things that Burke had, but having the one quality Burke was without. Who turns to Whitefield's sermons to-day for counsel or for comfort? But the size of the crowds that Whitefield attracted to hear him was limited only by the range of his voice. Who cares nowadays to shake the dust from off the five volumes of Sheridan's speeches ("edited by a constitutional friend")? And yet so potent was Sheridan's speech against Warren Hastings on the charge relative to the Princesses of Oude that an adjournment of the House was moved on the ground that it had left such an impression that no one could arrive

at a determinate opinion; while Pitt and Grenville, after consultation, decided that Burke's speech on the Nabob of Arcot's debts was not worth answering.

This discussion of eloquence may seem to some a digression, or at least an excursus; but it is justified by the essential similarity of oratory and the drama, the two oral arts, standing on the same plane and to be judged by the same standards. For example, the position of Burke on the platform is not unlike that of Browning on the stage. We may see in Burke all the qualities of a great orator; but the fact remains that those whom he sought to influence by his voice did not listen to him eagerly. And we may discover in Browning the qualities of a great dramatist; but the fact remains that his plays were not able to hold their own in the theatre. And, in like manner, we may parallel the vogue of Whitefield as a preacher with that of playmakers like the authors of the "Two Orphans" and of the "Old Homestead," who are ready to rest content if they can entrance the playgoer, and who have no hope of attracting the attention of the reader.

It is possible to discover in more than one dramatist of high rank the same feeling of distrust for a play that reads well which Fox so frankly expressed for a speech that reads well; and it is easy to adduce instances where the dramatist, having won the kind of success he sought, has been satisfied with that, shrinking from a publication of his plays which would permit them to be tried by purely literary tests. John Marston, in the preface to his "Malcontent,"—which he printed only because a pirate had already sent forth an unauthorized text,—asserts that "only one thing affects me, to think that scenes invented merely to be spoken should be inforcively published to be read."

For the same reason, Molière was compelled to publish the "Précieuses Ridicules." He also wrote a preface, beginning it by saying that it is a strange thing for people to be printed against their wills. He does not affect to despise his comedy, for in these matters the public is the absolute judge; and even if he had had the worst possible opinion of his play before the performance, he ought now to believe that it is good for something, since so many people together have praised it. "But," he says,—and here is the pertinent passage,—"but as a large part of the beauties which had been found in it depend on the gesture and on the tone of the voice, I thought it advisable that it should not be deprived of these ornaments; and I found the success which the play had had in the performance so great that I might leave it there." Thus we see that Molière, having composed at the same time the words of his

piece and the stage business that set off and sustained the words, was wholly unwilling to present to the reading public his mere dialogue stripped naked. M. Coquelin, in his striking paper on Molière and Shakespeare, has remarked that each of these great dramatists had thrown his plays alive on the stage, and did not recognize them on paper. For the authors, "Tartuffe" and "Hamlet" existed "only before the footlights. It was only there that they felt their plays bone of their bone and flesh of their flesh." Both Shakespeare and Molière were accomplished men of letters; and both of them were also incomparable masters of the dramaturgic art; therefore, nobody knew better than they how much of its most valuable quality a play must inevitably lose in its transferal from the boards of the stage to the shelves of the library.

All the great dramatic critics have understood this; and they have tried steadily to cultivate the "imaginative sympathy" needful to enable them to see a play as it might appear on the stage, and to seek always under the flowing words for the solid framework of the acted drama. But great dramatic critics are strangely scarce: there are a scant half-dozen of them in all the history of literature. There were at least five great Greek dramatists; but Aristotle is the only critic of the acted drama worthy to be named with Æschylus, Sophocles, Euripides, Aristophanes, and Menander. No great dramatic critic was a contemporary of the Elizabethan dramatists; and in the eighteenth century Lessing stands alone. The merely literary critic is rarely able to look for other than merely literary qualities. Even Charles Lamb, with all his liking for the theatre, collected specimens of the Elizabethan dramatists, which revealed them abundantly as poets and only casually as playwrights. The application of Lamb's method to the greatest of all the Elizabethan dramatists might have preserved for us more or less of the familiar quotations in Bartlett; but it would never have suggested the possibility of a volume like the "Tales from Shakespeare."

The true dramatic critic has discovered that the dramaturgic qualities are as special as the pictorial or the plastic, and that, therefore, there is almost as much unfairness in judging a play by the sole test of literature as in so judging a picture or a statue. Indeed, to measure a drama by literature alone is like trying to criticise a painting by a photograph alone; and it is not the best painting that is most completely represented by the camera.

M. Ferdinand Brunetière, tracing the epochs of the French theatre, asserts unhesitatingly that a play is under no obligation to be literary.

"The drama," he declares, "can, if need be, live on its own stock, on its own resources, relying solely on its own means of expression." He explains that while the epic, for example, and the ode must be literary, as a condition of their existence, a comedy has no more call to be literary than a sermon. This bold opinion of M. Brunetière's is only an enlargement of an opinion of Aristotle's. To quote from Prof. Butcher's admirable translation:—

> "If you string together a set of speeches expressive of character, and well finished in point of diction and thought, you will not produce the essential tragic effect nearly so well as with a play, which, however deficient in these respects, yet has a plot and artistically constructed incidents."

Thus we see that while literature may deal with words alone, while it may be a matter of delicate verbal adjustment only, the drama can get along without this refinement. The literary merit of a play is in what the characters say; for that is all that is spelt out in letters. The dramatic merit must be sought beneath the surface: it is to be found in what the characters do, in what they feel, and in what they are. "Hence the incidents and the plot are the end of tragedy; and the end is the chief thing of all," said Aristotle. And again:—"Tragedy is the imitation of an action, and of the agents, mainly with a view to the action."

After these quotations from two dramatic critics, let me quote also from two dramatic authors. The first is from the "Souvenirs" of M. Legouvé, perhaps best known to American theatre-goers as the collaborator of Scribe in the authorship of "Adrienne Lecouvreur." M. Legouvé tells us that

> "the talent of the dramatist is a very singular and very special quality. It is not necessarily united to any other intellectual faculty. A man may have much wit, much learning, much literary skill, and yet be absolutely incapable of writing a play. I have seen men of real value and of high literary culture bring me dramas and comedies which seemed to be the work of a child. On the other hand, I have received from persons of no great intelligence plays in which was to be found a something nothing else can take the place of, a something which cannot be acquired, which is never lost, and which constitutes the dramatist."

And the second quotation is from the younger Dumas, from the illuminative preface which he prefixed to his "Père Prodigue." After asserting that the real dramatist is born, not made, Dumas declares that dramatic effect is sometimes so intangible that the spectator cannot find in the printed text of a play the point which charmed him in its performance, and which was due perhaps to "a word, a look, a gesture, a

silence, a purely atmospheric combination." And then he goes on to say that "a man of no value as a thinker, as a moralist, as a philosopher, as a writer, may be a man of the first order as a dramatic author"; and, "on the other hand, for a thinker, a writer, a philosopher, to be listened to upon the stage, he must indispensably be provided with the special qualities of the man who has no other value. In short, to be a master in this art, one must be also skilled in this craft."

The history of the drama has a long list of more or less forgotten playwrights, skilled in the craft of the theatre, cunning in stage-effect, and owning no other superiority. But this dramaturgic faculty, which they had as a sole possession, was also the gift of all the great dramatists, who had this in addition to their poetry, their philosophy, their psychology. No intricate plot of Scribe's is more adroitly contrived than the "Œdipus" of Sophocles; and no melodrama of Kotzebue's is more artfully constructed than the "Othello" of Shakespeare. Vision and insight Sophocles and Shakespeare had, as well as subtlety and power,—things unsuspected by the writers of the "Ladies' Battle" and of the "Stranger." But the greatness of Shakespeare and Sophocles as dramatists was due, first of all, to that same gift of playmaking which was the whole of Scribe's possession and the whole of Kotzebue's.

It matters not how beautiful a building may be, if its structure be feeble and faulty; for then it can be neither useful nor durable. Strength must precede grace; and the dramatic poet must begin by being a practical playwright, just as an architect must master construction. Whenever a poet denies this obligation, and shrinks from due apprenticeship to stagecraft, he surrenders his chance of being a dramatist. The stage of their own times is the platform upon which the real dramatists have always found themselves at home. Euripides and Calderon and Corneille did not retire into an ivory tower: they brought out plays to please the broad public. There is no more patent absurdity than the play that is not intended to be played,—the closet-drama, as it is called.

This unactable drama of lofty poetic pretence is largely a development of our own day, although it may find a doubtful ancestor in the tragedy of Seneca. The Roman rhetorician did not intend his pieces to be performed; and this is fortunate for him, as the fate is not doubtful of plays in which the deed is forever sacrificed to the word, and in which the heartfelt cry is suppressed in favor of the elaborated antithesis. Whether Browning and Tennyson and Swinburne had it in them to be dramatists, nobody knows; but nobody can deny that they

are not dramatists as were Goethe and Schiller, as are Ibsen and Hauptmann. However various their qualifications, they fail to reveal the most important of all—the possession of sufficient stagecraft to make the performance of their plays profitable.

It is in this ability to hold the attention of an average audience of their own contemporaries that the inspired dramatists stand side by side with the uninspired playmakers. Poets they are, but, first of all, theatre-poets, in the apt German phrase. Even to-day, despite the gulf of two thousand years that yawns between us and the civilization of Greece, we are gripped by the inexorable action as the awful fate of *Œdipus* is unrolled before us in the playhouse, and we are dissolved in pity. And as for the sad story of *Hamlet*, were that performed in an asylum for the deaf and dumb, there would be no fear that the interest of the spectators would flag. There is that in "Hamlet" which the deaf would fail to get; and no doubt this is what gives the play its significance; but what they could take in by the eye alone would reward them amply for the effort. By whom was it first said that the skeleton of a good play was always a pantomime? And whoever has had the pleasure of seeing "L'Enfant Prodigue" has had proof positive that the drama can exist without even the elements of literature; for here was a play that made us laugh and made us cry, with never a word spoken.

The dramatists themselves have never had any doubts as to the relative importance of the theatrical and the literary elements in a play. To them, the skeleton of action is everything; and nothing, the verbal epidermis. In the preface to the "Mariage de Figaro," Beaumarchais assures us that, when he had mastered the subject of a play, he saw the characters before him. "What they will say, I don't know: it is what they are going to do that interests me." And Racine is recorded to have told a friend that a new tragedy of his was nearly completed,—as he had only to write it. Here, in Beaumarchais and in Racine, we see an incipient contempt for mere literature that came to a head in the advertisement of a New York theatre a few years ago, wherein it was proclaimed, as one of the elements of attraction of a certain more or less comic play, that it was "without literary merit."

A rough-and-tumble farce, hastily knocked together by a variety-show performer, to satirize rudely some folly of the moment, is of more importance in the actual development of the drama than can be any string of soliloquies and dialogues, however poetic or polished these may be. The farce that pleases the people has in it the root of the matter:

here is the germ of the real thing; while the drama for the closet lingers lifeless and inert on the shelves of the library. The influence of the unpretending popular play—the folk-theatre, as one might call it—is far deeper and wider than most historians of literature have perceived. The beginnings of Molière's comedy must be sought in the French farces and in the Italian improvisations of his boyhood; and no one has yet worked out the exact indebtedness of Victor Hugo and the elder Dumas to Pixérécourt and Ducange and the other melodramatists of the boulevard-theatres, whose labors made the path straight for the Romanticists.

The reason why this folk-theatre was so soon forgotten is simply because it lacked literature. Its merits were not only primarily theatrical; they were wholly theatrical. These plays were actable, but they were not readable; and when they ceased to be acted, they disappeared into darkness. The instant that they were crowded off the stage, they fell sheer into oblivion. The success of a play, be it tragedy or comedy, depends upon its fitness for the playhouse and for the players of its own time; but the survival of a play depends on its literary quality. Only literature is permanent. As the younger Dumas goes on to say, in the preface from which I have already quoted,

> "a dramatic work should always be written as though it was only to be read. The performance is only a reading aloud by several persons for the benefit of those who will not or cannot read. It is through those who go to the theatre that the work succeeds; and it is by those who do not go that it subsists. The spectator gives it vogue; and the reader makes it durable."

Upon this side of the discussion there is no need to dwell. Nobody disputes that dramatic literature must be literature, although there are not a few who do not insist that it must be dramatic. The great dramatists have accepted the double obligation; and they have always recognized that the stage of the theatre, and not the desk of the library, is the true proving-room. This double obligation it is that makes the drama so difficult an art,—perhaps, indeed, the most difficult of all the arts.

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